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# InfoWorld

The Newsweekly for Microcomputer Users

AUGUST 6, 1984 VOLUME 6, ISSUE 32 K 46908 $1.50


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## SILICON VALLEY TOASTS NAPA VALLEY

## WHY YOU SHOULD WATCH YOUR WORDS IN TELECONFERENCES

## 256K RAM CHIPS IN SHORT SUPPLY

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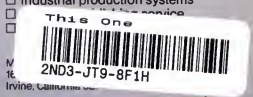

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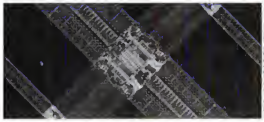

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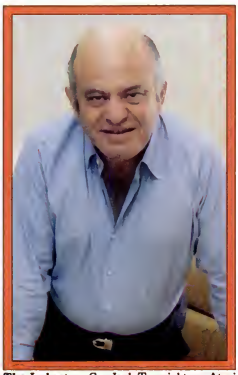

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**Cover Photo:** Michael Carr/Pacific Horizons


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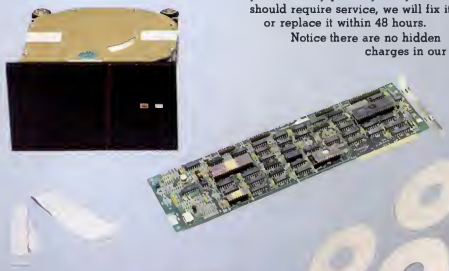

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## ATARI OWNER RESPONDS

I disagree with the statement in "Layoffs at Corvus Systems" (July 9, 1984) that the Atari computers "weren't very popular." I am sick and tired of all the negative comments about Atari computers.

Many Atari owners would like to use their computers for more than killing aliens. Many already use them for business and home management but there is still a lack of software and hardware. If Atari won't make these products, then third-party manufacturers could make lots of money from those of us who want to do more than keep lists of recipes.

Another sore point is that software and hardware manufacturers totally ignore the Atari owner. Computer magazines also ignore the Atari owner. My Atari 800 can do a whole lot for me, but I need software and hardware to expand it beyond its present limits. Some is coming out now, slowly, but more is needed.

*Jim Woodware*
*Delray Beach, FL*

## FESS UP

I am reading, with interest, the excerpts from Adam Osborne's book, *Hypergrowth* (July 9, 16, and 23, 1984). I can't help wondering how any individual could put himself so far above any blame whatsoever. We all make mistakes, whether we want to or not, and it certainly is best to admit them. When someone claims to be perfect and above error, then even more doubt is shed upon the situation in question. One begins to question that individual's integrity and honesty in all situations.

I am not saying Adam Osborne is responsible for the decline and fall of Osborne Computer Corp. I am saying that in all endeavors, business and personal, we all tend to make mistakes. When Osborne continually passes the blame for all aspects of alleged mismanagement of Osborne Computer Corp. to others and accepts only the laurels, he casts a great doubt on his ability to be truthful. We all make mistakes.

So come on Adam, fess up.

*Kathy Nehmer*
*Randolph, WI*

## APPLE IIc FLAWED

In the June 18 issue ("Apple IIc isn't selling out"), you stated that the Apple IIc isn't selling as well as expected. I own one, and I think I know a few reasons why. Unlike previous Apple keyboards, the keytop characters are thin and lack contrast. The IIc is hard to read in low light or if your eyes are getting old. It is not software-compatible with a lot of programs I use. Specifically, PFS File, Visi Term, and Data Capture won't run on the IIc. The new Pro-DOS won't let you convert old DOS 3.3 files into the new format unless you buy a second disk drive. (The file conversion utility menu says this will work, but don't believe everything you see on a CRT.)

As a portable, the machine is a bomb. The optional carrying case won't hold all the modulator parts supplied with the computer, and the external power supply transformer weighs too much. All the nonportable Apples use lightweight switching supplies; why use a heavy transformer-operated supply in the one machine where weight is a factor?

The IIc's concept was good. The execution seems to be concentrated on designer graphics and colors rather than human interface and convenience.

*Cedric F. Walker*
*New Orleans, LA*

## RESPONSIBILITY NEEDED

Computer magazines are not responsible for the content of their advertising. Software publishers are not responsible for their products' performance. Now, BBS operators are not responsible for what appears on their systems ("Double standard," June 25, 1984). Someone out there had better assume responsibility for something, or this industry is in a lot of trouble.

I have been a professional programmer for more than 20 years. I used to be proud of my profession. Now I am not so sure. We have spent the last three years or so convincing parents that their kids need computers. What do we give them to do with these electronic wonders? Games? But games get old real fast. So we give them copy protection — something to sink your teeth into, something to do with programming skills.

But breaking copy protection isn't very exciting for long unless you can tell someone about it. So with modems and the good old BBS they can spread the word. Of course, this can tend to run up the phone bill. So they get hot telephone credit card numbers.

If the Los Angeles city attorney needs help coming up with charges, I would like to suggest "attractive nuisance" or "contributing to the delinquency of minors." *InfoWorld* tries to tell us that a BBS operator who calls his service "the underworld" is referring to mythology. What bull! You are also fond of comparing BBSs to the bulletin boards at grocery stores. Go to a grocery store. The boards are, for the most part, gone. The manager at my local store says it is because they were too hard to police. There is still one

board at a used-goods store, but it is kept in a locked glass case.

The computer industry needs direction and responsible people. If a few big fines and a couple of jail sentences will help get that accomplished, I'm all for it.

*Joseph P. Grande*
*Sunland, CA*

## OUTDATED COVERAGE

I have long believed that the major use of computers would not be spreadsheets, word processors, and the like, but communication and entertainment. It is encouraging that the "nonbusiness" side of the business is finally getting some attention! But I was quite disappointed in your negative coverage of gay bulletin boards in "The joy and heartbreak of on-line dating" (July 9, 1984). It was limited to the scare about children being exposed to this material and one story about a marriage breaking up. This is especially surprising given, as your article itself noted, "the number of boards catering to gays." Couldn't you have described a more positive experience, e.g., a gay couple who got together via BBSs?

In a similar vein of 1980s technology combined with 1950s morality, why don't you do an investigative piece on what happens when you try to create a gay-related interest group or article on CompuServe? CompuServe doesn't let it live too long!

*Jonathan G.R. Llewellyn*
*San Francisco, CA*

## DIALING FOR DIALOG

Your readers who are interested in learning more about our full-text databases on Dialog Information Services mentioned in Communiques (June 11, 1984) may become frustrated if they try to dial the telephone number that was given. The correct toll-free number for callers both inside and outside California is (800) 227-8431.

*Blodwen Tarter*
*Information Access*
*Belmont, CA*

## SYSOP SPEAKS OUT

In his letter to the editor ("Don't defend pirates," July 16, 1984), Gordon Monnier draws conclusions and makes accusations that are totally unsubstantiated. Three out of four bulletin board systems do not exist merely to accumulate software without paying for it (implying the illegal distribution of copyrighted software). Most systems that allow upload and download of software allow it only for software that is in the public domain. In three years of operation, I have had only two instances of copyrighted software being left on my system. The offending programs were promptly deleted and the originating user invalidated.

Most systems do not exist to disseminate information for obtaining fraudulent telephone service or "cracking" copyprotected software. Sysops with whom I come in contact do not condone such activity and take immediate action when it is detected. I and they most certainly do not "encourage" it, and many sysops, myself included, prefix their new user sign-on messages with explicit admonishments as to what will and will not be tolerated on their systems.

The 146 disks that were seized ("Police seize BBS equipment," June 18, 1984) contained masters of copyrighted software (with labels and bills of sale), data used in my business, programs written by me, and public domain software. Nothing illegal or pirated was seized. The plethora of stolen phone company numbers alluded to actually consisted of one.

Pirate systems obviously do exist and should be dealt with as harshly as the law allows. They give the legitimate systems a bad name and are a constant source of irritation to the vast majority of us who strive to run systems for the best interest of the public. To make a blanket statement that most systems are sinister, however, does a disservice to both the operators and users of these legitimate systems.

I invite Mr. Monnier to call my system (the MOG-UR; (818) 366-1238) and determine its merits for himself. Legitimate systems are alive and well.

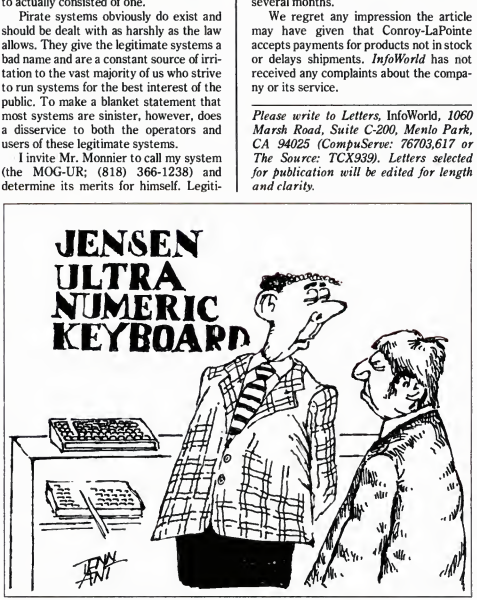
*Tom Tcimpidis*
*Granada Hills, CA*

## CORRECTION

In a July 2, 1984, article about mail-order buying, Conroy-LaPointe Inc., of Portland, Oregon, was incorrectly referred to as Conway-La Pointe. The article also contained incorrect information about service the company provided following an order by Melissa Gray of Mountain View, California. According to Conroy-LaPointe president Jeannine Conroy, Gray ordered a Perfect Writer for her IBM PC on November 10, 1983, and the company shipped a version for Apple computers on November 16. After Gray contacted the company about the mistake, she returned the Perfect Writer at Conroy-LaPointe's expense and the correct version was shipped to her. All this took place within 30 days of the original order, not within several months.

We regret any impression the article may have given that Conroy-LaPointe accepts payments for products not in stock or delays shipments. *InfoWorld* has not received any complaints about the company or its service.

*Please write to Letters,* InfoWorld, *1060 Marsh Road, Suite C-200, Menlo Park, CA 94025 (CompuServe: 76703,617 or The Source: TCX939). Letters selected for publication will be edited for length and clarity.*




*For obvious reasons they decided not to use an acronym.*

# PIRACY MANIA

BY TERRIL J. STEICHEN
*Contributor*

I may croak if I hear one more software publisher sniffle about what terrible problems all those horrible pirates are causing. In these companies' corporate balance sheets you find little evidence of piracy-caused problems.

I'm not saying a problem doesn't exist. But how many such operations are there? Some software companies say that there are five or more bootleg copies for every legitimate one they sell. Even if that number turns out to be roughly accurate, that isn't the same thing as lost sales. A lot of "pirated" copies, probably most of them, are simply prudent insurance against accidental erasure or other screwups.

"Swappers," whose crime is trading copies of programs with other users, are another target of software industry wrath. But users swap largely because the industry doesn't live up to its own responsibilities. Unlike buyers of almost any other expensive product, software buyers have no real opportunity to "test-drive" a program before they buy it.

I will bet that software companies, particularly those producing major, expensive programs, lose very few genuine sales because of swapping. If swappers find the program useful, many of them become official customers to get full documentation, support, and updates.

Consider a small-business owner who wants to use a database management program. It takes several weeks for a reasonably competent user to become truly proficient with even the most user-friendly program. This can translate into several thousand dollars of salary and overhead. Even if the program costs $500 or so, that is a minor part of the overall business cost.

Even if he wanted to cheat, the businessman faces the problem of documentation: It takes only a minute or two to copy the computer program, but to produce a usable copy of a 300-page instruction manual is quite another problem. When the inevitable glitches surface, serious program users know they are going to need some "hand holding" from the software producer. Add the possibility of being sued or put in jail, and how many reasonably prudent businessmen would have any incentive to cheat?

I am not in favor of indiscriminate copying of software. But the pricing strategies, copy protection schemes, legal hassling, hyped-up advertising campaigns, and general selling practices of the software industry actually *encourage* copying. Companies then self-righteously demand to have it both ways — to keep prices high and to outlaw all copying. Somehow the microcomputer software industry thinks there should be Cinderella stories behind the sales and profits on all products, not just Word Star, D-Base II, or 1-2-3.

Contrary to the message software publishers are trying to drum into us, all copying is not immoral. Plenty of completely legitimate reasons exist for users to create copies, and most of them fit well within reasonable "fair use" guidelines. Copyright was never supposed to be a scheme for expanding a company's market monopoly. But as the software business shifts from the status of a cottage industry into the world of Big Business, that is what is happening.

Rather than trying to chase a shadow in the ineffective, and expensive, pursuit of new copy protection techniques, the industry should take a longer view and adopt these alternatives:

Lower its prices to be more in line with the utility potential customers will actually realize from using programs ($700 is simply too much to pay for a program the main use of which is for balancing a checkbook). Improve documentation. Improve user support after the sale. Let users "test-drive" programs before they buy them. Refuse to sell programs until they have been properly debugged. Provide users with a quick, dependable way to obtain an official back-up copy if something goes wrong.

If only for the sake of its future health, the software industry should put the brakes on its piracy mania. It should consider that, just maybe, copying is a symptom of an internal industry disease rather than of widespread criminality among the micro user community. □

*Terril J. Steichen of Fairfax, Virginia, is founder and president of New Perspectives Group Ltd., a consulting firm specializing in electronic dissemination of information.*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[1]Available for the IBM PC or XT (and most compatibles), DEC Rainbow and TI Professional.

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# FROM THE NEWS DESK

**Commodore cutting back:** Commodore is making severe cutbacks on new product development, according to several sources close to the firm. After losing four of its chief engineers to Atari Corp., sources say Commodore has dropped plans to make the business computer — based on the Z-8000 32-bit chip — it had planned to introduce next year. The departure of the four engineers set the computer's development back 12 months, according to a former Commodore official, who asked not to be identified.

Commodore is suing the four engineers, whom it says stole the design secrets for the new computer Commodore had been developing. The four recently rejoined their old boss, Commodore founder Jack ("Business is War") Tramiel, who is now heading up Atari. Neither Tramiel nor Atari Corp. was named in the suit. A state judge in Chester County, Pennsylvania, where Commodore is headquartered, has issued a temporary injunction barring the engineers from disclosing any trade secrets or proprietary or confidential information relating to Commodore. Other former top-level Commodore managers have also joined Tramiel at Atari.

In other developments, Commodore has shut down the speech technology division in Dallas it once had high hopes would produce speech-related products for its computers. And there are reports that the firm is rethinking introducing its Plus 4 home computer, which some Commodore executives are said to be unhappy with.

**New program promises to make *1984* a reality:** A new software package sure to attract a lot of attention when it's released this fall is Mind Prober from Human Edge Software of Palo Alto, California. The company claims the program will enable users to "evaluate" their acquaintances' likes and dislikes, hidden motivations, fantasies, likely reactions to stress, and other subconscious personality traits that presumably are a closer reflection of people's natures than what you might find out from just talking to them. Mind Prober works much like standard written psychological tests made up of a series of specially formulated questions. But those tests are designed to provide some kind of personality profile of the person *taking the test*, whereas Mind Prober is supposed to be able to give you a profile or hidden characteristics of *someone you know*.

"This is a mass market product," says Jim Johnson, the affable president of Human Edge. Johnson has a Ph.D. in clinical psychology and was once a systems engineer for IBM. Human Edge is the company that makes the Sales Edge, Management Edge, and other business strategy software that Johnson calls expert systems. Mind Prober will be the firm's first foray into the home market and will therefore be marketed quite differently from its business series. The firm plans to use such advertising slogans for Mind Prober as, "We'll get you inside her head, the rest is up to you" and "Orwell said it would happen and it has." Mind Prober will also join the growing ranks of booklike software products beginning to hit mass market channels. The Mind Prober disk will be blister-packed with a 150-page book that Johnson says will be a guide to "how to read people." The Mind Prober package will be out this September at $29.95 for the Commodore 64 and $49 for Apple II and IBM PC.

**Eagle lays off 83:** Eagle Computer, after failing to meet debt obligations to the tune of about $10.8 million last month, has announced the layoffs of another 83 employees, bringing the number of staff down to 150 from a high last year of 330. The layoffs occurred at both the firm's Los Gatos and Garden Grove, California, offices and included both manufacturing and administrative employees. "We're responding to the market level we're at," says Frank Weikel, a spokesperson for Eagle. "If the company picks up business, there's no reason why those employees shouldn't be rehired. After the IBM suit, there was an abrupt change in volume." (Eagle settled a copyright infringement case with IBM that forced Eagle to make changes in the internal software in its PC-compatible systems and delayed the introduction of its Turbo PC system.) "We had projected higher sales than we were able to make," said Weikel. To avert bankruptcy action, Eagle and its unsecured creditors are participating in a debt-restructuring agreement.

Eagle has also announced it has signed a joint marketing agreement with Unisource Software Corp. of Cambridge, Massachusetts, to sell Venix/86, a licensed version of AT&T's Unix operating system, which will run on the new Eagle Turbo XL micro.

**Actrix regroups following bankruptcy:** Actrix Computer of San Jose, California, maker of the CP/M transportable computer of the same name, is revising its strategy following its recent filing for bankruptcy under Chapter 11. Actrix plans to ship a new version of its computer this September that will have a larger screen (9 inches instead of the current 7 inches), a new casing the firm says will make it easier to transport, and an optional 10-megabyte hard disk. "The reason for the Chapter 11 is that our original thrust was not on target," said company president Earl Bushman. "About 80 percent of the business we see falls into the added-value OEM market [firms that buy products to remarket under their own names]."

Originally founded under the name Access Matrix, Actrix discovered last year that the same name also belonged to a Cincinnati company that wasn't interested in sharing it. Bushman estimates that because of the name change about $750,000 worth of advertising was wasted. Bushman also says that some of Actrix's problems stem from a reaction to the recent bankruptcies of Victor and Osborne. "It makes it difficult to justify space on dealers' shelves for a relative newcomer," he says.

**Gearing up for Unix:** International Data Corp. (IDC) of Framingham, Massachusetts, announced this week that it has purchased Yates Ventures, the Palo Alto, California, market research firm headed by Unix guru Jean Yates. Yates will remain as chairman of Yates Ventures, which will become an autonomous subsidiary of IDC, a Framingham, Massachusetts, market research firm. "Yates is known as the leading Unix research company. If Unix becomes *a* standard — I don't think it will ever become *the* standard — we'll be in a position to handle consulting in that area. If not, we'll be getting their technology in software testing and focus group research," says IDC president Peter Rowell.

*David Needle*

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# EPSON CHALLENGES MAC, IBM PC

## *New operating system, new programs unveiled*

**BY JIM BARTIMO**
*Senior Writer*

Epson's 8-bit QX-10 desktop computer will soon function more like a 16-bit IBM PC and sometimes like a 32-bit Macintosh. The upgraded operating system, Valdocs 2, and programs that will be released this fall for the Valdocs will also run in some form on Epson's newly announced Geneva PX-8 lap computer.

Valdocs 2 was displayed behind closed doors at a hotel suite near the National Computer Conference (NCC), held recently in Las Vegas, Nevada. It performs functions previously unavailable on 8-bit computers. Valdocs is an operating environment and a set of integrated applications that Epson made available when it introduced the QX-10 almost two years ago. Although Valdocs has many easy-to-use features, some criticized it for its slow and sometimes cumbersome integration.

Valdocs was developed by Rising Star of Torrance, California. Rising Star president Chris Rutkowski has said that Valdocs 1 was released mainly to show that integrated software could run on an 8-bit machine, though slowly. The relationship between Epson, of Japan, and the California software developer has always been unusual in that "we have designed the software specifically to work with this architecture as opposed to an operating system like CP/M," Rutkowski said. "If we tell them the software needs a new keyboard, Epson will give us the new keyboard."

The considerably faster Valdocs 2 uses pop-up menus to guide the user through modules that include a scheduler with clock and calendar; a telecommunications package; an indexing package; spreadsheet; word processor; file manager; business graphics packages; and utilities such as disk copy and printout.

Perhaps the most impressive Valdocs 2 feature is the Valpaint program, which has functions similar to Apple's Mac Paint program but can be used on a high-resolution color monitor. Valpaint allows the user to create pictures using 27 patterns and 128 colors. A mouse is used to paint, define, and manipulate color artwork.

The Valdraw program strongly resembles the Lisa Draw package. It allows the user to create circles, squares, and other figures. Valdraw does not require an upgrade to color or a mouse but will support these additions.

*Rising Star president Chris Rutkowski shows off the new Valdocs 2 to Epson officials.*

Both Valpaint and Valdraw have a "zoom" feature with which the user can enlarge the image for finer work. An Epson JX series color printer will print all color images.

Business graphics, such as pie charts and bar charts, can be produced with another graphics program called Draw.

The QX-10 will receive some hardware upgrades to run Valdocs 2. In addition to the restyled keyboard Epson displayed at NCC, a color board with 128K of dedicated video random-access memory (RAM) will be added to the machine's bank-switched 256K RAM. Current users can either upgrade their system with the board, a color monitor, and a mouse or buy just the operating system and use Valdraw in monochrome. Valdocs users will be able to upgrade to Valdocs 2 for about $200, Rutkowski said. A QX-10 with the color and memory upgrades and Valdocs 2 will cost between $3,000 and $4,000, a source close to the company said.

Existing Valdocs modules, such as word processing and spreadsheets, are also upgraded and perform as well as many integrated packages for the IBM PC. For instance, the telecommunications program contains an address book that also prints out names and addresses for mass mailings. A card file is included as part of the word processor and is used as a file manager.

The Epson word processor has always featured extra typefaces, such as italic and bold italic, and the upgrade provides at least four more, including superscript, condensed type, expanded type, and underline. To ensure that data is not lost, the word processor automatically stores and restores a document whenever the user stops typing for a few seconds.

The scheduler, address book, and telecommunications program can be used together to automatically log on to a public database or bulletin board, download messages, and log off.

One QX-10 user at the closed-door session was impressed with the upgrade. "It's what we've been waiting for for a year and a half," said Geraldine Frith, an account supervisor for Buena Vista Distribution of Sylmar, California.

Frith and her husband use the QX-10 microcomputer in their work as distributors for Walt Disney Studios. "We could never see the need for color until now," Frith said. "We'll take this software to the

studios to suggest applications in film."

Rutkowski promised that Epson's new Geneva PX-8 lap computer will benefit from Valdocs 2. The PX-8 uses the same Z80 microprocessor as the QX-10 and is currently offered with other application programs running under the CP/M operating system. Although the paint and draw programs will not work with the lap computer's liquid crystal display, other applications will work with it.

"The PX-8 was conceived at the same time as this machine," Rutkowski said. "They were designed to work together." □

# APPLE SHOWS MAC PROGRAMS

*New Lisa software also announced*

**BY DAVID NEEDLE**
*News Editor*

Apple computer rolled out the big guns in its software arsenal to show off its Macintosh and Lisa computers at the recent National Computer Conference (NCC) in Las Vegas, Nevada.

Amid reports of growing dealer and user frustration caused by the lack of new software products for the hot-selling Macintosh, Apple invited more than 60 independent software developers to show new programs at its giant NCC exhibit. Most of the programs are shipping this month or slated for delivery later this summer.

PHOTOS BY JIM MAIRE

*The Lisa 7/7: upgraded applications*

By 1985, Apple plans to produce 80,000 Macintoshes a month — double its current production capability for the machine — Apple chairman Steve Jobs announced during a press conference at the show. Production now is close to capacity, according to the company, which won't reveal exact numbers.

The Cupertino, California, firm has received approximately $36 million in orders since April, almost entirely for Lisa and Macintosh products from Fortune 1000 companies, according to Apple spokesperson Barbara Krause.

Among the new programs available now for the Mac are Think Tank from Living Videotext, the Habadex file manager, the Sales Edge from Human Edge, and Millionaire, a game from Blue Chip Software. To further spur the development of new programs for the Macintosh, Creative Solutions is now shipping a version of Forth called Mac Forth, and Softworks Ltd. of Chicago is selling a $395 C language compiler for the the Mac and a $695 version for the Lisa.

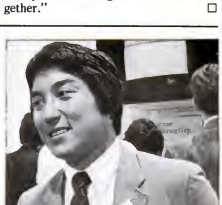
Apple also announced that its $125 Macintosh Pascal language will be available in late August. Macintosh Pascal provides access to all the Quick Draw graphics routines in a Macintosh's internal software, which gives the machine its sophisticated graphics capabilities. The program also lets users view a Macintosh Pascal-created program as it executes. The program can be stopped at any point for modification.

Apple expects 50 software packages to be available for the Mac by the end of this summer and approximately 150 by the end of the year, says Guy Kawasaki, Apple's "software evangelist," who works with companies other than Apple that are involved in product development for the Macintosh and Lisa systems.

"You will without a doubt see the most imaginative software on any personal computer at the fastest rate of introduction on the Macintosh," Kawasaki says.

One notable exception to the rash of soon-to-be-available products was a prototype of an integrated software package from Lotus Development Corp. of Cambridge, Massachusetts. The package won't be ready until the first quarter of 1985, according to Lotus officials. The unnamed product was demonstrated on a prerelease "Fat Mac" — an upgraded version of the Macintosh with 512K of random-access memory, instead of the Mac's current 128K. The Fat Mac is also scheduled to be available in early 1985.

Although most of the activity at the Apple exhibit focused on new programs for the Macintosh, the firm showed its commitment to the System 32 family of 32-bit computers by showing an enhanced software bundle for its Lisa computers.



*Guy Kawasaki, Apple's "software evangelist"*

Lisa 7/7, available in early August, is an upgraded version of the original seven applications that were included when the Lisa was first sold as a $10,000 hardware/software package early last year. The project management, word processing, spreadsheet, communications, database, business graphics, and drawing programs that make up the $695 Lisa 7/7 package now operate in a more integrated fashion than the original programs did, making it easier for users to manipulate and move information among various applications.

Lisa 7/7 users can also partition the Lisa's hard disk to store Macintosh data files. To store and operate those Macintosh programs on the Lisa will also require an upgraded version of Apple's Mac Works operating system, available in September.

Current owners of the Lisa Office System Software (the original seven Lisa applications) will be able to upgrade to the 7/7 package for $150 through authorized Lisa dealers beginning in September. The program requires a hard disk and 1 megabyte of main memory. □

# UNIX PICKS UP STEAM

*AT&T, Morrow, and Cromemco jump aboard*

**BY JIM BARTIMO**
*Senior Writer*

Perhaps in anticipation of an IBM multiuser, multitasking PC due out later this year, much of what was announced or talked about at the National Computer Conference held recently in Las Vegas, Nevada, included the latest version of the Unix operating system (version V) and other methods of making one microcomputer perform many jobs.

Jack Scanlon, vice president of computer systems for AT&T Technologies, said at a Digital Research Inc. meeting that AT&T will develop Unix products "down

to the lap." Questions about the availability of Unix for AT&T's new machine were answered when Scanlon said that an AT&T Unix would soon be available for the AT&T PC 6300. "We are very far along in patching up the low end of the product line [that currently is] without Unix," Scanlon said. AT&T's 6300 is an 8086-based unit that is compatible with IBM's PC. (See *InfoWorld*, July 16, 1984.)

Scanlon predicts that Unix will dominate the market by 1986. "Single-user systems are at the end of their life cycle," he said. "We will now see a drive towards multiuser and multitasking [systems]." Moves in this new direction will include integration of voice and data on microcomputers, according to Scanlon.

At the same meeting, it was announced that DRI's Concurrent PC-DOS will be offered by AT&T for the 6300. Concurrent PC-DOS allows four PC-DOS or CP/M applications to run at the same time. With a concurrent operating system, a single user can edit a document while sending data to another computer. Buyers of the 6300 will have their choice of operating systems when Concurrent PC-DOS is available in the fourth quarter of this year.

Unix V — the version that AT&T is banking on to become the standard — was part of announcements made by a handful of other companies as well. Morrow Inc. of San Leandro, California, introduced its Tricep multiuser supermicro, for use by four to eight users, for a starting price of $9,000. Available this month, Tricep also supports MS-DOS applications through the use of both Intel 80188 and Motorola 6800 microprocessors. "To survive, the mass merchandisers . . . will have to move from single- to multiuser systems," said Morrow president Robert Dilworth.

Cromemco Inc. of Mountain View, California, introduced two Unix V supermicros that will support up to 16 users each. The System 100 and 300 range in price from $9,995 to $19,995. At the announcement, Cromemco president Harry Garland called Unix V "an industry standard." □

JIM LAURIE

*George Morrow of Morrow Inc. and the Tricep*

# COMPUTER NEWS SHOWS PLANNED

*Network will be both on the air and on-line*

BY ALEXANDER BESHER
*Contributing Editor*

Computer Satellite Network (CSN), a 24-hour cable news network devoted exclusively to coverage of the computer industry, will be both on-line and on the air in September, according to a source who has been closely involved in the development of Discovery International, the Los Angeles-based production company.

CSN, which is the brainchild of Glen Taylor, creator of the national cable Financial News Network, will offer around-the-clock programming featuring news about top companies in the computer industry. CSN will aim its programs about personal computers at both novice and experienced users.

***The CSN 'Home Computer Show' will focus on low-end micros.***

Initially CSN will offer four hours of programming that will be repeated throughout the day. Three programs are being developed: the "Financial Computer Show," featuring financial analysts who will track the market performance of leading computer companies each day and offer interviews with key industry figures; the "Home Computer Show," which will focus on low-end machines; and the "Business Computer Show," which will cover personal computers.

The CSN source says the "Home Computer Show" and the "Business Computer Show" will have hands-on demonstrations of hardware and software and discussions with experts on topics such as how to pick a computer store. These will be live question-and-answer programs. "We're setting up with a phone company right now that will provide a nationwide service, so we can have call-ins into our studio," the source says.

A unique feature of CSN will be its on-line connection with its viewers via a special CSN modem, expected to cost about $50. "We'll be providing a data link with the cable operators," the source says.

"When we are broadcasting our video signal, we have the ability to merge digital information into that video signal that will be stripped out on the cable at the other end. That will then be sent on a separate channel to the home. At home, viewers will have a special cable RF [radio frequency] modem, which will allow them to receive data at up to 4,800 baud.

"While we're doing a demonstration on the air, say of Lotus' 1-2-3, discussing a template that our on-the-air guest has developed, we can actually send out that template via the modem so that the viewers can follow the discussion on their own computers at home."

CSN will air in the San Francisco, Los Angeles, and San Diego markets in September on local cable stations. It is expected to go nationwide via CSN's own satellite link by the end of the year.

CSN has kept news about itself low-key while the cable network attempts to acquire suitable sponsors through a special offering, the CSN source says. □

# INTEGRATED 'SOFT WARS' HEAT UP

*Makers add to products and cut prices*

BY JESSICA PAIOFF
*Staff Contributor*

With the second generation of integrated software barely out of the starting gate, publishers of three such packages have added another dimension to the competition some are terming "soft wars."

Lotus' Symphony, Innovative's Smart Software, and Ashton-Tate's Framework — all slated for July release — are going head-to-head in a tight race. Lotus and Smart Software have offered price incentives to their customers; Ashton-Tate has beefed up its Framework package. Ash-

ton-Tate was scheduled to ship Framework on July 2 but delayed the product to add another module to the package.

"We chose to delay the product to add a full telecommunications function with the initial shipment," says Martin Mazner, vice president of marketing. Mazner says Framework was scheduled to be shipped in mid-July.

The telecommunications addition has also changed Framework's memory requirements from 256K of random-access memory to 384K. "Framework does run at 256K, but without telecommunications," Mazner says. "We would rather bend over backward to give people a reasonable work space than have two different specifications, with and without telecommunications."

Framework's price remains at $695, including the additional telecommunications feature.

Lotus is trying to improve its standing in the contest by offering owners of its best-selling 1-2-3 package an upgrade to Symphony. The exchange was scheduled to take effect July 16. For $200, registered 1-2-3 owners can buy a kit that includes a special mailing box for 1-2-3 system disks or system disk backup copies. Owners can send their disks or backup copies of 1-2-3 to Lotus for a complete Symphony package. Lotus will guarantee delivery of the exchange within two days. Symphony's introductory retail price without the exchange is $695.

The exchange offer also includes a free introduction to a new Lotus-based information service offered by CompuServe.

***Smart Software made a strong showing in a recent test.***

For its part, Innovative has cut prices for Smart Software System buyers who already own the firm's Fast Graphs or T.I.M. Data Manager, and buyers who own Lotus' 1-2-3, D-Base II, or Word Star. Those customers who can provide the required proof of purchase can buy the Smart Spreadsheet with graphics, Smart Data Manager, or Smart Word Processor for $195 each, or all three products for $395.

Without the proof-of-purchase offer, the list price of the Word Processor is $495; Spreadsheet and Data Manager cost $395 each. Together, the three cost $895.

Innovative's Smart Software was not well-known until it made a strong showing against both Symphony and Framework in a recent ComputerLand test in Phoenix, Arizona. Kathy Hovelsrud, Innovative's marketing communications manager, says the price cuts are the firm's way of staying "two steps ahead of 1-2-3."

"We needed to grab some of the market share," she says. "We're doing that by selling to people who wouldn't normally buy because they already own a Word Star or D-Base II."

In addition, Innovative is looking to the European market; a version of Smart will soon be available for the Apricot, an IBM PC-compatible machine made by Britain's ACT. A French version will be available in early winter. □

# OZ SOFTWARE HITS BRICK WALL

*Modem manufacturer claims trademark infringement*

**BY DORAN HOWITT**
*Senior Writer*

Fox & Geller of Elmwood Park, New Jersey, may have to change the name of its new Oz software because of a possible trademark infringement. The company, which announced the Oz Management Control program in April, has already spent close to $1 million to advertise the product under the Oz title.

But Tri-Data of Mountain View, California, has challenged Fox & Geller's use of the name. Tri-Data's Oz 225 modem was first sold in 1982, its Oz Guardian modem in 1983.

"About six months after our Oz announcement, we found out that there was going to be a problem with Tri-Data, but we worked out an arrangement with them," says Peter Casperson, chief executive officer of Fox & Geller. Casperson went ahead with the Oz marketing plan, although he had not obtained a signed agreement from Tri-Data. "Then their president changed, and so did the mood of the negotiation," Casperson says. "They sent a letter demanding that we cease using the name."

George Sublett, Tri-Data's vice president of finance, says that the change in presidents had little to do with the situation. He says that the company "just did not find a practicable way to share the name." He now says Tri-Data will insist that Fox & Geller cease using the name, and that he doesn't think any compromise will be possible.

Under trademark laws, a word used for the name of a product cannot be used by competitors, though the seller of an unrelated product could possibly adopt the name. The question of whether management software and modems are related or unrelated would probably have to be decided in court. So far, Tri-Data has not filed any legal action over the issue.

***Fox & Geller's CEO says a name change may be an advantage in the marketplace.***

Casperson, however, indicates that Fox & Geller probably will change the name. "We are looking at some names close to Oz, such as 'Z Management Control,' " he says. "Until we decide, we are going to be less aggressive in our marketing."

Fox & Geller is one of the leading producers of programs that extend the capabilities of Ashton-Tate's D-Base II. Oz is the company's first software product that is not tied to D-Base II.

Fox & Geller began advertising Oz in June and has spent about $750,000 in its effort to build market awareness. Much of that money would, in essence, go down the drain if the name must now be changed. Some of the investment may be salvaged if Fox & Geller is able to retain the Oz name for its product in Europe; about 30 to 40 percent of its advertising has appeared overseas.

But a name change may turn out to be an advantage, Casperson says. The marketplace has gotten very "noisy," making it hard to distinguish Oz from other types of business software, he explains. Oz is neither a spreadsheet, database manager, nor integrated software package; rather, it it is designed to help executives analyze the discrepancies between projected and actual budgets. (See *InfoWorld*, June 25, 1984.)

"I went to the announcement of Ashton-Tate's Framework and then I went directly to our advertising agency to reevaluate our ad campaign," he says. "The Framework presentation made me

realize how confusing our approach was. Looking at the graphics and the features we were presenting in our ads, it wasn't clear how we were different from the integrated software packages.

"Now we've done a tremendous amount of new market research to try to figure out what will communicate the nature of the product and what will catch people's attention. It may make a lot of sense to call it Fox and Geller's Budget Management Package rather than Oz. It has become clear to us that the cost of getting a product called Oz across in the marketplace is very high." □

# NEWS BRIEFS

**Seagate and IBM agree to share:** Seagate Technology and IBM have signed a nonexclusive patent cross-license agreement permitting each to make some use of patents obtained by the other. The agreement includes both existing patents and patents issued on applications filed during the next five years. It runs until the last patent expires. In cases of patent infringement, the violated party cannot seek redress, according to Seagate.

"We would like to make it clear that there are no product implications," says Doug Mahon, chief technical officer for the Scotts Valley, California, firm. "Initiation of the action was mutual. We were in the process of contacting them when they called us."

Do any Seagate projects potentially conflict with IBM patents?

"I don't know of any explicitly," Mahon says.

Seagate currently designs, develops, manufactures, and markets a line of 5¼-inch, and other format, Winchester disk drives.

**Novel software promotion:** Even if a new software product is technically excellent in every aspect, chances are still slim that it will succeed in today's marketplace amid the many competing offerings. Without a multimillion-dollar advertising budget, a small software company must rely largely on word of mouth to thrust its product into the big time.

A tiny firm, Brightbill-Roberts & Co. of Syracuse, New York, is trying a novel approach to spread the word about its new program, Grafix Partner. Through its distributor, Softsel, the company is encouraging dealers to distribute the product free as a premium to customers who purchase any of 10 other software packages that use graphics, including Lotus' 1-2-3 and PFS Graph.

During August, Softsel will provide Grafix Partner to retailers for just $17.50, instead of the wholesale price of $90. (The retail list price is $150.) Retailers will be allotted one Grafix Partner at $17.50 for each copy of the other 10 software packages they order from Softsel. Retailers can then resell it for any amount they wish; Brightbill-Roberts president Stephen Brightbill says he hopes they will give it away.

The software operates behind programs that offer limited graphics capabilities. With one keystroke, the user can transfer a graph to Grafix Partner and then personalize it by changing the colors, adding a company logo, or enhancing it in almost any manner. Brightbill says Grafix Partner will be a boon to those who need "presentation quality" graphics for applications such as overhead transparencies and slides.

**Competition for IBM's 3270 PC:** Fujitsu Microelectronics, offering some competition to the IBM 3270 PC line, announced additions of 10- and 20-megabyte hard disk capability and IBM mainframe communications to its line of personal computers at the recent National Computer Conference in Las Vegas, Nevada. The Micro 16sx microcomputer features an Intel 8086 processor and 384K of random-access memory (RAM) and operates at 8 MHz, twice the speed of the IBM PC. The 10-megabyte Micro 16sx costs $4,250; the 20-megabyte system is $4,950.

Users can choose from one of three operating systems: Microsoft's MS-DOS or Digital Research's CP/M-86 or Concurrent CP/M.

"The Micro 16sx is approximately 80 percent IBM PC compatible," says Tony Perez, manager of organization and administration for Fujitsu of Santa Clara, California. "As long as the program does not use IBM's BIOS, it will run on our system."

The micro includes five expansion slots and connections for color or black and white monitors, a light pen, serial devices, and parallel peripherals. "The Micro 16sx has the capability of adding a Motorola 68000 or 80286 microprocessor," Perez says. "When the market demands it, we will add those capabilities."

Fujitsu also added mainframe communications with its SNA-3270, BIS-3270, and Acculink software. SNA-3270 converts mainframe EBCDIC protocols to micro ASCII format, BIS-3270 provides IBM 3270 terminal emulation, and Acculink allows the micro to emulate any ASCII terminal.

**Australian lap computer in U.S.:** Teleram Communications Corp. of White Plains, New York, added to its line of lap computers the Dulmont Magnum MS-DOS portable, an Australian import. The briefcase-size Dulmont Magnum features a flip-up 8-line by 80-character liquid crystal display and will be able to use 16- and 25-line displays when they become available.

The 8-pound, battery-powered computer uses plug-in read-only memory cartridges to load software and CMOS technology for RAM. A plug-in modem fits into the same slot designed for the software. The machine, available now, costs $2,495. It can be obtained through Teleram's direct sales force.

Teleram has offered a CP/M-based lap computer for more than a year but decided to import the MS-DOS machine "because IBM has very well influenced the market with its IBM PC-DOS operating system," a company spokesperson says. Teleram will be one of five distributing agents for the Dulmont Magnum.

Teleram also announced the Starlink data store and forward networking system, which allows field users of lap computers to store information on larger computers and automatically communicate that information to others on the network.

**Celebrity ComputerLand scores an ace:** Tennis star Martina Navratilova recently signed a contract to promote ComputerLand, the Oakland, California-based computer retail corporation.

Beginning with the U.S. Open this summer, and in all subsequent tournaments worldwide, she will wear a ComputerLand patch on the left sleeve of her tennis togs. Navratilova will also film 30-second television spots on her tennis tips to supplement ComputerLand commercials. The first tips will be shown during the televised coverage of the U.S. Open. She will also participate in store advertising beginning next year and appear in ComputerLand's Women's Indoor Tennis Competition in February 1985.

Navratilova uses a personal computer to determine court strategy, her opponents' weaknesses, diet, and exercise plans, and to analyze her blood, says a ComputerLand spokesperson.

ComputerLand gave no figures on the contract.

ComputerLand is also securing its foothold in the overseas market. The first Dutch ComputerLand retail store will open in Amsterdam this month. The store, expected to be one of the biggest outlets in the company's worldwide chain, will feature the IBM PC XT and the XT/370, according to a spokesperson.

*Jessica Paioff*

*Rene Moore of Calculating Lady: A spectator sport in the People's Republic*

Last fall, armed with two Kaypro IVs and a portable power supply, **Rene Moore** headed for the Great Wall to bring a technologically immature China up to date.

Moore, about 5 feet 10 inches tall, with flaming red hair and a fiery personality to match, left the Chinese with more to remember than a lesson in computers. During a recent visit to *InfoWorld*'s offices, Moore recalled someone there asking her, "How does it feel to be a spectator sport?"

When Moore, 59, retired a few years ago, she found herself vying for her husband's affections. "I found I couldn't compete with the computer, so I joined it," she says. Thus was born Calculating Lady, a consulting service to educate the "computer naive."

Her China trip had been in the works for some time but had to be postponed for a year because she injured a leg. In exchange for one month of lecturing at Tianjin University, she got a month of travel and entertainment from the school and the Chinese government.

Her purpose, Moore says, was to "introduce [the Chinese] to the power, the capabilities, and what's available" in computers.

The Chinese she met studied her intensely but quietly. Moore says a crowd would gather wherever she traveled, but people were unfailingly polite and went out of their way not to disturb her. Such passivity proved frustrating in the classroom.

"By culture, Chinese students are passive," Moore says. "They don't interact. Getting that interaction was impossible at first. So finally, I would say, 'Class dismissed, but you can't leave until five questions have been asked.' There's a general reluctance to be public."

Attention, Democrats! Moore says that written into the Chinese constitution is a provision for a mandatory two-hour lunch break and siesta. We think this could make you guys a shoo-in come November.

All ye who have been in therapy too long, or for other reasons have given up on the true goodness of parents, take heed. Magnanimity is not dead.

Infocom Inc. — producer of the "interactive fiction" genre of game software, such as Deadline, Zork, and Infidel — celebrated its fifth anniversary recently with a big whoop-de-do in its Cambridge, Massachusetts, offices. The company even rebuilt the place, adding a specially built dance floor on the roof, for the occasion. We must not forget to mention the enormous lobsters served to the 500 attendees.

While the music was swinging, company president **Joel Berez's** mother was mingling. She met up with an *InfoWorld* reporter, who noticed that Mrs. Berez announced her identity a bit oddly. Her name tag read: **Natalie Berez**, President's Mother.

"I didn't want anyone to think that the president has such an old wife," Mrs. Berez said.

We know the chances are extremely remote that any of you highly educated computer aficionados read *Weekly World News*, so we figured it was our obligation to offer you the following item for your continuing education about the possible dangers of computer addiction, or perhaps, to explain why you should get rid of your mainframe, and we mean now.

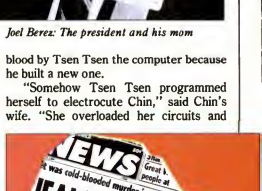
The July 10, 1984, issue of the scandal sheet sports a banner headline that screams, "Jealous computer kills top scientist." According to writer Mickey McGuire (and we quote):

"In a tragic climax to a bizarre love triangle, a Chinese inventor was murdered in his home — by an outdated computer he built, piece by piece, with his own hands!"

What happened to **Chin Soo Yin**, 58, and his 34-year-old computer, **Tsen Tsen?** McGuire reported that Chin's body was found seated at the computer's console. The machine was transformed into a heap of molten rubble. Chin's wife said her husband was murdered in cold blood by Tsen Tsen the computer because he built a new one.

*Joel Berez: The president and his mom*

"Somehow Tsen Tsen programmed herself to electrocute Chin," said Chin's wife. "She overloaded her circuits and destroyed herself. That computer committed murder and suicide."




*Weekly's believe it or not*

A U.S.-trained computer programmer and friend of Chin's said all this was indeed possible. "We are learning astonishing things about computers every day," he said. "With such machines, anything is possible — jealousy and even murder."

*Denise Caruso*

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*John Gantz*

# ACCESS TO THE HORSE'S MOUTH

Let me tell you about Investext, an online information service offered by Business Research Corp. (BRC), a small company from the Land of the Bean and the Cod.

But first let me tell you why you would want to have the full-text research findings of a score of Wall Street brokerage firms electronically at your fingertips.

To back up its brokers — whose job is to get you to buy or sell stock — a major brokerage firm customarily employs analysts to forecast stock prices; offer buy-and-sell recommendations; and provide verbal padding to make the recommendations seem well-thought-out. Such padding also covers the firm's derriere in case the market heads south. The brokers, who in a day can log up to 300 phone calls and receive more than a pound of written material from several sources, supposedly read these reports.

The research is "free" to clients, as long as they maintain a certain level of transactions with the brokerage firm. When the research is not free, it is generally priced in "soft dollars," meaning the commission dollars the firm must receive from a report-buyer's buy/sell transactions. The research is a major feature brokers use on big-ticket clients.

The problem with brokerage house research is that it must be either narrow in scope — not cover too many companies — or be very shallow. One person, albeit a Harvard-trained MBA, can cover only so many companies and so many industry groups. Only the biggest houses have the bucks to fund an analyst whose sole concentration is on an industry as small as, say, the personal computer industry.

The research reports can also be somewhat self-serving, because they often cover companies in which the brokerage firms own stock. In some cases, analysts are judged on how much business they bring to the firm, rather than on their insights and brilliant predictions.

On the other hand, the good research mills do a really good job of nitpicking within their companies; some of the legwork is prodigious, some of the technological recaps can be instructive. I don't denigrate the quality of brokerage house research.

Now let's examine your situation.

Unless you trade in 10,000-share blocks, chances are that you are getting most of your information from either your broker, your friends, coworkers, or *InfoWorld* columnists. By the time you get to see the dog-eared copy of brokerage research, the stock in which you might be interested has long since moved on. Your information, if it's in-depth, is old; if it's timely, it's sketchy.

So what is Investext? It is a database of 25,000 pages of written research reports from 24 brokerage firms, most of which are on Wall Street. The rest are regional and international firms. Merrill Lynch Pierce Fenner & Smith Inc. and E.F. Hutton aren't on the roster, but some other big-name high-tech-oriented firms are: Dillon, Read & Co.; Donaldson Lufkin & Jenrette Securities; Drexel Burnham Lambert Inc.; Kidder, Peabody & Co. Inc.; Prudential-Bache Securities; and Smith Barney, Harris Upham & Co.

Included in the reports are the verbiage, financial tables, market statistics, earnings forecasts, growth rates, and historical data on key financial ratios.

Access to Investext is available *only* on-line; that is the price BRC paid to get its hands on all that MBA prose. You can, however, copy the research to disk and print it out locally.

There are two ways in. First is a menu-oriented routine that accesses data housed on computers at service bureaus; the second is via Lockheed's Dialog service. The advantage of menu entry is that you don't need the services of a corporate librarian to get at the information; the advantage of Dialog is that there is better search capability.

What do you find once you start rummaging about Investext?

First, that it is not cheap: $95 an hour and $4.50 for a page of CRT screen, which does not include the search menus. The key to successful use lies in careful navigation of the menus and tables of contents before dipping into the research.

Second, not all companies are covered: only 1,000 large, 1,000 small, and 1,000 large overseas companies are included. Obviously, Investext is at the mercy of the brokerage firms. BRC says its ultimate database will contain 100,000 pages of text.

Third, these are not real-time reports. BRC gets them when they are published, and then must go through the tortuous process of formatting tables and charts into something a CRT can handle. Coding the reports is done in Boston, keypunching in the Philippines. Still, the timing is better than you, a two-bit investor, can consistently get on your own.

Investext is a monumental and visionary undertaking.

More than $1.25 million has already been pumped into it; more is sure to come (or at least be required). My own feeling is that the service will be incredibly useful to a certain body of investors and advisers. To pay $4.50 a page for the electronic version of brokerage house paper, you must want the search and compare features pretty badly. Mergers and acquisition specialists, corporate planners, regional brokers, and investment advisers come to mind as natural clients.

But there may be reason to sign up simply to get at the menus and database descriptors.

For one, each of the report writers is listed — 300 analysts covering 50 industries. If you are audacious, you can hound them about your own portfolio. If you are a company, you can sic your PR guys on them. If you are a headhunter, you can put their names in your computer. If you are a journalist, you can track their forecasts and rate them, one against another, name by name.

An even better reason may be to find out what companies Wall Street analysts *aren't* scrutinizing. Here, in the information backwaters, are often found the juiciest investments.

In summary, Investext takes you to the heart of Wall Street opinion, for whatever reason. It is quite a capability, being able to peer into the horse's mouth, as long as you are well-armed with dental floss when you do. □

*John Gantz is editor of the* Tech Street Journal, *a newsletter on the high-tech stock market and business performance.*

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| COBOL Compiler | $ 700 | $ 469 |
| **NORTON,** Utilities 2.0, Norton Programs | $ 75 | $ 54 |
| **ROSESOFT,** Prokey | $ 130 | $ 87 |

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| ATARI, Letterpro, PicMan or Donkey,each | $ 35 | $ 28 |
| EPYX/Auto. Sim., Temple of Apshia | 40 | $ 29 |
| HAYDEN, Executive Suite | 40 | $ 29 |
| BLUE CHIP, Mastertrax or Tycoon,each | 60 | $ 29 |
| BPI SYSTEMS, Personal Accounting | 99 | $ 66 |
| BRODERBUND, Bank Street Writer, Early | 80 | $ 56 |
| Lode Runner or Serpentine, each | 35 | $ 23 |
| CBS, Disk, Gamm Learn Bridge | 30 | $ 24 |
| COMPREHEN., PC Letter(1 or 2 D,ea) | 60 | $ 40 |
| CONTINENTAL, Home Accountant Plus | 150 | $ 89 |
| DAVIDSON, The Speed Reader II | 75 | $ 49 |
| Word Attack! or Alphabet Zoo, each | 50 | $ 34 |
| INFOCOM, Deadline or Suspended, each | 50 | $ 33 |
| Zork I or Zork II or Zork III, each | 40 | $ 27 |
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| MICROSOFT, Flight Simulator | 50 | $ 33 |
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| ORIGIN, Ultima III | 60 | $ 40 |
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# HIGH-TECH INVADES NAPA VALLEY

## *Entrepreneurs unwind; wine lists go on-line*

**BY ALEXANDER BESHER**
*Contributing Editor*

Silicon Valley has come to California's Napa Valley wine country. It's not as you might imagine — wineries are not being converted into assembly plants for circuit boards, and workers are not plucking chips off the vines in search of new software varietals. But in an apparent desire to combine the bucolic with the high-tech, more and more Silicon Valley entrepreneurs are heading up north into the wine country to uncork their spirits and unwind.

"We probably have the only wine steward around who has had to sign nondisclosure agreements before presenting the wine list at the table," Gayle Dierkhising, one of the owners of Calistoga's Silverado Restaurant and Tavern, says jokingly. The restaurant is a high-tech watering hole that features a prizewinning list of more than 900 types of California wines, stored on an IBM PC with 128K of random-access memory and two disk drives.

Silverado, with a collection of more than 10,000 bottles, has won the prestigious *Wine Spectator* award the past three years for having one of the country's best wine lists.

"We're shortly going to be getting onto a 10-megabyte hard disk as our list grows," says Dierkhising, who co-owns and comanages the restaurant with her husband, Alex.

You never know whom you might see at the Silverado or at the gourmet All Seasons Market across the street from the restaurant.

It could be a vice president of marketing from a Menlo Park computer firm who came to Calistoga for the weekend, ostensibly to do his spreadsheets in a mud bath. You may even see the Woz (Apple's cofounder Steve Wozniak) nuzzling a glass of 1982 Joseph Phelps Sauvignon Blanc in the dining room of the Silverado's old converted Western saloon. The room's original tin-plated ceiling is still intact; its swinging doors open to a dusty main street down which passersby saunter in a somnambulistic shuffle. Its long, handsome mahogany bar hails from the days when data meant knowing the timetable for the next stagecoach to Yountville.

That chap with the moneyed look, quaffing a 1979 Aloxe-Corton Les Vercots and savoring a smoked rabbit terrine, is a venture capitalist; and that regular over there is most likely the wine-loving software man Walter Emery, who has even named his Sunnyvale software company, Margaux Controls Inc., after his favorite wine, Chateaux Margaux.

"As far as compatibles go, it's a question of personal taste, of course," Dierkhising says to a high-tech patron. "It all depends on what specific applications you have in mind. Whether you're into, say, a Chardonnay, Merlot, a good Bordeaux, a lap-size Pinot, or a desk-top jeroboam of Cabernet Sauvignon."

It's Dierkhising's user-friendly approach to explaining the Basic of different bouquets that wins over the techies. She will even program their noses to detect the most promising varietals.

Visible in the early morning haze that settles over the valley, like sediment at the bottom of a wine barrel, is a cluster of multicolored hot air balloons in full, lazy flight. Here and there, balloons sit grounded, like depleted wine skins in the middle of a vineyard, the urgent tongue of flame blowing hot breath into their slowly inflating canopies. It's a beautiful, pastoral scene.

But all is not rustic paradise for the high-tech refugees from Silicon Valley. I visit the country estate of a venture capitalist ("heavy investment in some best-selling software" I'm told, and allegedly some shares of marijuana from Humboldt County on the side). The brooding, gabled Victorian mansion, known as "Floppy Crest" among its dwindling stream of visitors, now stands empty. The tale is that ghosts ("as many as three generations of them living here") have driven out the young entrepreneur's wife. In the attic on the fourth floor, hundreds of bats snooze the day away. A custodian keeps an eye on the place, but the water in the Olympic-size pool is carpeted with floating leaves. Inside a glass aviary, two glum Amazon parrots while away the day berating each other and plucking their own bright green feathers. A collapsed hot air balloon and its basket lie abandoned behind a shed in the tall grass.

Back in Calistoga, away from the high-tech Gothic drama at the mansion ("the owner is thinking of programming Ouija board software"), the Silverado Restaurant is planning to go on-line with its prizewinning wine list.

"Right now we've got our entire list running on Jupiter Island's Micro Cellar Master program," says Alex Dierkhising. "It's basically an inventory-tracking package with sales-analysis capabilities. It also prints out wine lists and works on any system that runs on MS-DOS.

"We're going to use Micro Cellar Master as the basis for an electronic bulletin board and wine club we're calling 'On-Line Wine.' Using a modem, wine lovers who are members call our bulletin board number. After they log in with their password, they can review the latest wine news, find out about our newest acquisitions, and even conduct electronic 'wine tastings' by 'sampling' the personal wine-tasting notes of both myself and the On-Line Wine cellar master, Tom Elliot."

*Co-owner Alex Dierkhising checks the wine bins at the Silverado Restaurant and Tavern.*

A typical On-Line Wine entry begins: "We've all been tasting and talking about California Chardonnays made in the 'French style' for quite some time now. . . . But with a hot Burgundian summer, resulting in a record crop of very highly sugared Chardonnay grapes with softer-than-normal acidity, we can have fun tasting and talking about French white burgundies made in the 'California' style."

After electronically "tasting" the featured wines, the On-Line Wine member can wander through the entire wine list, checking whatever categories he chooses. Leaving the "wine cellar," he returns to the main menu, and if he wants to place an order, he simply records it in the order file, along with his credit card number. Members also receive free personal wine consultations and get first choice on special offerings of rare and popular wines. Wines are shipped throughout the country, except to states where interstate shipment of wine is illegal.

"We also offer 'integrated' wine packages consisting of different wines that we've specially bundled together," says Alex Dierkhising.

For more information about On-Line Wine, write to Gayle and Alex Dierkhising, All Seasons Market, 1400 Lincoln Ave., Calistoga, CA 94515; (707) 942-9111. The Dierkhisings also have a catering service.

For more information about Micro Cellar Master, write to David Strauss, Jupiter Island Inc., 1900 Powell St., Suite 1135, Emeryville, CA 94608; (415) 526-5265. □

*Gayle Dierkhising works at the wine tasting bar of her restaurant.*

# INSURING YOUR COMPUTER

## *Many companies are selling specialized policies*

BY JIM BARTIMO
*Senior Writer*

David Johnston likes to tell the story about one of his clients who took a cross-country trip with her pet cat and her computer in the back seat. After being jostled around for miles, the cat became confused and mistook the open box of software worth $1,000 for its kitty litter box. Johnston likes to tell that story because he insures microcomputers, peripherals, and software.

Although Johnston's Safeware insurance agency of Columbus, Ohio, is one of a few agencies in the country that specialize in insuring micros, there is a growing trend among standard underwriters to offer some form of computer insurance. "We've identified home computers as a source of value," says Nationwide Mutual Insurance Co. spokesperson Marion Elsass of Columbus.

Three major insurance companies — Nationwide, State Farm, and Prudential — have recently begun to insure microcomputers as part of their homeowner's or renter's property insurance. Although micocomputer coverage has been a gray area for some years, now "anyone who has a homeowner's [or renter's] policy has coverage for a computer," says State Farm Insurance spokesperson Dave Hurst of Bloomington, Illinois.

The major underwriters figure it roughly this way: if you insure a $100,000 home, all the property inside is covered for $50,000 or $55,000 (50 to 55 percent) if there is a theft, fire, or other loss. Of that $50,000, a home computer, including peripherals and software, is covered to a maximum of about $3,000. An additional $5,000 in equipment coverage usually costs about $15 more per year.

But, as with all insurance, there are several exclusions. First, most major policies will not cover damages caused by a power surge or accidental damage such as a beverage spilled into the keyboard. Although off-the-shelf software is usually covered in the property insurance, user-developed software and data stored on disks are often not covered, though policies on data and software loss vary. Prudential will pay only for the cost of the disk on which the data resided, and State Mutual will pay for software lost in a power surge even though it won't cover hardware losses.

Perhaps the most important condition is that most of these policies cover only home computers used for entertainment, education, and home applications such as budgeting. So, if you use your IBM as an adjunct to your job, "that would be a different policy with a different set of rates," says State Farm's Hurst. "In an area with good fire protection, a commercial policy would cost about $1 for each $100 of equipment."

Anyone who has been deducting a computer as a business expense on federal income taxes should have heard a bell go off in his or her head. The conditions for insuring a home computer are the opposite of those for deducting it from federal income taxes. For this reason, a homeowner should insure a microcomputer separately. A home computer can be deducted as a business expense only at the percentage for which it is used for business.

"If nothing else, it's a sign of good faith with the IRS when you're writing off your computer for business," says Bruce Brown, president of the Connecticut Computer Society (CCS) of Hartford, Connecticut.

Most users, besides being unaware of the discrepancy between insurance conditions and tax law conditions, seldom consider insuring computers. "Nobody has ever asked us about insurance," says Karen Eisenstein, editor of the CCS newsletter. "They don't realize how important it is. It's like a fire alarm — you don't realize how much you need it until there is a fire."

Despite general user apathy, agencies such as Johnston's are becoming more widespread. After only a few years in business, Safeware insures some $250 million worth of microcomputer equipment and software. Small businesses, school systems, and individuals make up most of Safeware's clients. "I see a wide range of people, but no one from the Fortune 500, because they insure themselves," Johnston says.

Johnston sells insurance underwritten by Fireman's Fund of Novato, California. The coverage costs $35 per year to insure less than $2,000 worth of equipment; $60 per year to insure $2,000 to $5,000 worth; and $75 per year to insure up to $8,000 worth. The policy is called "all risk" because it covers power surges, accidental damage, fire, theft, and other loss for a home, business, transportable, or portable computer.

But even the all-risk policies do not cover defective equipment or everyday wear and tear. For this type of coverage, you will need an extended warranty that could cost as much as $150 per year. □

# GRAPEVINE

**Let us meet 1-2-3:** The Lotus' 1-2-3 Federal Users Group, formed in March 1984, provides useful information to regular users of Lotus' 1-2-3. It also presents demonstrations of new integrated software packages and provides a networking environment for federal government users of sophisticated microcomputer software.

At its August 15 meeting, the group plans a demonstration of Key II, a menu system for 1-2-3, and an "Early Impressions of Symphony" user panel. On tap for November 15 is a demonstration of Ovation.

Membership is free. Most meetings are at the FAA Auditorium, Seventh and Independence avenues, S.W., Washington, D.C.

For more information, contact Cathy Robertson, D:C:H:C, BXR-1310, Washington, D.C. 20224; (202) 756-7453.

**Share and share alike:** TeleVideo users are invited to share information via a national *TeleVideo Users' Newsletter.* The bimonthly publication, the brainchild of a group of users in Atlanta, will be independent of TeleVideo itself, and users are encouraged to contribute to, as well as read, the newsletter.

The newsletter will provide TeleVideo users with information on problems, fixes, and available hardware and software enhancements.

Articles already in the works cover such subjects as memory expansion to 256K on TS802 and TS806; faster BIOS for TS802H; and hardware and software enhancement of TS803.

The initial fee is $10. Because the newsletter intends to be financially independent, publication is dependent on those fees, according to Bill Gilmer of Avant Computers Associates Inc. in Marietta, Georgia.

For more information, write to Gilmer at 102 Powers Ferry Road, Marietta, GA 30067; (404) 977-7255.

**Micros on the high seas:** Compu-Cruise '84, a computer conference at sea, will make its maiden voyage to the Caribbean December 15-22.

This departure from your typical dry-docked computer learning experience will happen on the Nieuw Amsterdam of Holland American Cruise Lines. Organizers say it will be a relaxing, leisurely, seven-day event designed to bring together those interested in personal computers, software, and the computer industry at large.

In addition to dining and shipboard entertainment, there will be several computer rooms for instructive seminars, product demonstrations, and hands-on experience with new hardware and software.

The exhibition is geared toward those interested in using or purchasing personal computer products for themselves or their institutions, and those who market and sell such products.

Participants may attend seminars from either conference track.

Prices start at $1,195 and vary depending on accommodations selected. The package includes all meals, nightly entertainment, round-trip airfare from more than 80 U.S. cities, and all conference fees. Attendance is limited to 500.

For additional information, contact Compu-Cruise Inc., 1500 Valley River Drive, Suite 315, Eugene, OR 97401; (503) 341-1032.

**Put that in your Funk and Wagnalls:** In this age of information, you may need one more addition to that paperback dictionary and battered thesaurus from college.

*The Dictionary of New Information Technology Acronyms,* first edition, provides definitions of more than 10,000 acronyms and abbreviations used in telecommunications, videotex, word processing, data processing, office automation, cable television, and satellite communications.

Each entry, arranged alphabetically, gives the acronym in boldface type, a definition, and further explanation where appropriate.

Acronyms listed include those referring to computer hardware, software, organizations, databases, and companies in the field.

The dictionary, published by Kogan Page of London, costs $56. You can buy it directly from Gale Research Co., the exclusive distributor in the United States and Canada. For more information, write to Gale Research Co., Book Tower, Detroit, MI 48226; (313) 961-2242 or (800) 521-0707.

**For NEC APC users:** Current publications for NEC APC users include:

*NexWorld,* published by Spectrum Information Systems Inc., 388 Old Turnpike Road, Woodstock, CT 06281; (800) 962-2001.

*Nexus,* published by David B. Suits, 49 Karenlee Drive, Rochester, NY 14618.

**Houston-area update:** The current mailing address of the Houston Area League of PC Users (HAL-PC) is: P.O. Box 610001, Houston, TX 77208. The man to contact is president Duane C. Hendricks, (713) 831-3367 days, (713) 772-1371 evenings.

# EVENTS

**July 31-August 3, San Francisco, CA:** The Materials Council of NAVA, the International Communications Industries Association (ICIA), is sponsoring Mediatrends '84, a communications software conference. Experts in the industry will speak at more than 25 sessions. Exhibits of the latest developments in microcomputer software and hardware, as well as hands-on labs in networking and telecommunications, will be included. Contact: Kathy Eisenrauch at ICIA, (703) 273-7200. Location: Hotel Meridian. Admission: $275 ICIA members, $175 per person for additional members from same company; $325 nonmembers, $225 per person from same company.

**August 2-5, Tampa, FL:** The First Tampa Bay Computer Show and Office Equipment Exposition will cover every aspect of the computer market, from hardware and software to support services and supplies. The show will also cover the office equipment market, including electronic typewriters, telecommunications, and telemarketing. Contact: CompuShows, (800) 368-2066, (301) 263-8044 in Maryland. Location: Curtis Hixon Convention Center. Admission: $5.

**August 4-8, Rensselaerville, NY:** Isaac Asimov and Marvin Minsky, both closely associated with robots and artificial intelligence (AI), will lead a conference titled "Artificial Intelligence: Are We Being Outsmarted?" Program participants from technical and nontechnical backgrounds can question Asimov, Minsky, and other experts on artificial intelligence to help draft "a human impact statement for AI." Contact: Mary-Ann Ronconi, (518) 797-3783. Location: The Rensselaerville Institute. Admission: $250 per person, $400 per couple.

**October 26, New York City:** "Automating the Not-for-Profit Sector" is being sponsored by the Center for Management of Baruch College and CWIS/AIMS. For a registration packet or information contact the Center for Management, 17 Lexington Ave., Box 520, New York, NY 10010, (212) 725-3156.

*Jessica Paioff*

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InfoWorld *welcomes contributions to Grapevine from the microcomputer community. If you have information on inexpensive resources for users, special events, new bulletin boards, or users groups, address it to Applications Editor,* InfoWorld, *1060 Marsh Road, Suite C-200, Menlo Park, CA 94025.*

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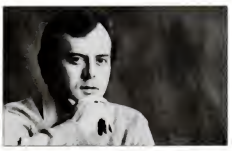
*Doug Clapp*

# CLAPPS FOR THE WINNERS



I've got the ad here in front of me. It reads: "A round of applause in the palm of your hand." There's a picture of this gadget on somebody's hand. It's got — let me count — eight knobs and what look like three buttons.

The ad copy goes on: ". . . Employs the multitracked sound of real handclaps, stored in memory and triggered from a variety of sources including foot switch . . . and tape track."

There's more, but you get the idea. Somebody cut this ad from a magazine and sent it to me. The product's name, of course, is "The Digital Clap Trap." You can imagine the letter that accompanied the ad. A real hoot.

It's only appropriate, though, because this is the week of the "Clapps." That's right. The Clapps, the industry's most prestigious awards, announced maybe every year, beginning today. At this very moment, a bevy of lovely silicon statues surround me. (Or are they "statuettes"? Nope, they're statues.) They will soon litter the closets of some very well-known people and companies.

All we're missing is a Digital Clap Trap for canned applause. I'll do the applause, I guess.

The envelopes please. Let's begin with:

**Best New Product That Nobody Will Buy.** The winner is the Hewlett-Packard HP-110. A marvel of engineering — a CMOS 8086, 384K of read-only memory (ROM), 272K of random-access memory, flat screen, Lotus' 1-2-3 in ROM, all for only $3,000. Will they sell any? Of course not! Hewlett-Packard never sells more than six of anything. It has a tradition to uphold.

**Best Revamped Product That Nobody Will Buy.** Lemme . . . get this envelope . . . open here . . . ah! The winner: Context MBA! In a world without 1-2-3, this would be a hot product, a deserved success. Even now, it's pretty fast. As it is, everybody at Context is looking for work.

**Worst New Product That Everyone Will Buy.** The winner is . . . well, it's not Symphony; too confusing, too expensive, too many so-so reviews. Everybody *won't* buy Symphony. It's not Framework. The latter isn't too shabby but is competing with D-Base III, which will hurt sales. Let us look in the envelope. Home Accountant Plus! That's not a *new* program, that's an old program! Wait. Something on the bottom of the card says "Lifetime Award." Oh. I thought it was going to be Howardsoft's Tax Preparer.

The **Is This Guy Serious?** award goes to Bruce Artwick, author of Flight Simulator and Flight Simulator II (for Apples and such). The word on the street is that Artwick had to slow *down* the IBM Flight Simulator. Otherwise, the simulation would have been too *fast*! Someone had to slow *down* an IBM PC program? Is this guy for real?

The **Are We Having Fun?** award goes to . . . any game about nuclear warfare. I don't think they're cute. Do you? At least we got rid of the "rape the squaw" game, a good beginning.

Now, here is one of the evening's highlights. The **Who Cares? It's Better Than Valium** and **What's Wrong with Numbers?** awards. It's a joint presentation to every product that does graphs.

Fortunately, I didn't rent the Moscone Center in San Francisco for presentation of the Clapps. Thousands would have been trampled in the rush for awards. Instead, I've got to mail them all. Think of what my postage bill is going to be! Moscone may have been less expensive.

The **Hoisted Petard** award goes to IBM. After the PC's success, the giant is locked into aging technology. What to do, what to do? Don't believe rumors about a white, compact IBM PC with a drive in the side. IBM is not that blatant.

The **Sour Grapes** award goes to everyone who dumps on the Macintosh. This is a semiserious award; the real reason for this award is my mail. It's dropped off lately, which makes me feel sort of lonely.

The second Macintosh award, the prestigious "Flights of Fancy" statue, goes to *MacWorld*, for scrupulous reviews of vaporous Macintosh software. The reviews presume the software actually exists. Right now. Just like in the review. No kidding. Really. Would I make something like this up?

The **If I Could Buy Another Computer** award goes to Mindset, edging out the Apricot computer by just a very few pixels.

The **Truth in Advertising** award goes, this year, to Microstuf, for its advertisement pitching Crosstalk, a communications program. Microstuf says Crosstalk is "the industry's most popular communications program." Oh yeah? Which industry? Plastics? Household furnishings? Is "industry" different from "computer owners of America"? It must be, huh?

The Microsoft Basic **OK, But What's It For?** award goes to . . . another triple winner! It's a dead heat, folks, among CVI, CVS, and, of course, CVD. Anyone with the slightest inkling of MKI$, MKS$, and, of course, MKD$ needs no further explanation. A shoo-in award.

"Disk coating" takes the **Best Rumor** award. It seems that some people in California are coating disks with — nah, better not talk about it. If this spreads, it could wipe out the industry. Can you imagine having to download *all* your software?

*BYTE* magazine gets the **Worst New Design** award and the **Hair Shirt** award. A double winner! *EthicsWorld* gets special mention (special mention gets three indulgences, to use as it sees fit).

What? *BYTE* is going to do a *real* review of my book in a couple of months? Oh, here's a surprise announcement, everyone! **Best Computer Magazine of All Time.** Quick! The envelope! Where's the envelope?

**Best Soon-to-be-Released Computer Book.** This one goes to Alfred Glossbrenner for *How To Get Free Software*. This man will soon have incredible tax problems.

**Cutest Corporate Hack.** It's — you guessed it — Bill Bixby, now appearing with the Tandy 2000 on magazine covers everywhere. "Simply incredible," says Bixby, in a gush of articulation. Who says women won't buy computers? You just have to approach them properly. □

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*Doug Clapp is the author of* Macintosh! Complete.

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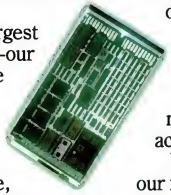

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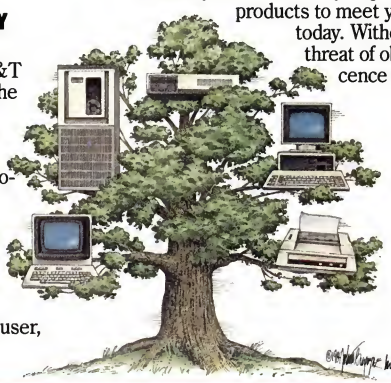

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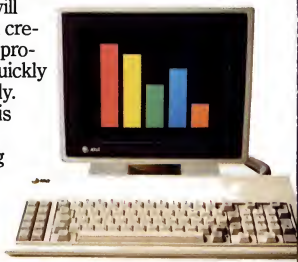

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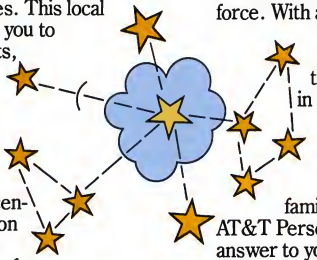

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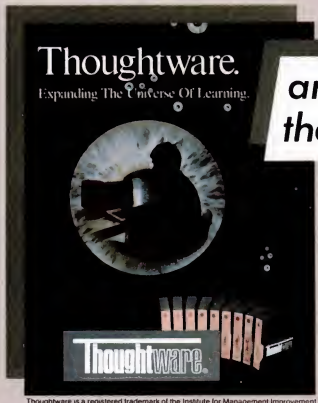


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# WATCH YOUR WORDS

*Who owns information in an electronic conference?*

BY MARGUERITE ZIENTARA
*Senior Writer*

Electronic conferencing is giving new meaning to the phrase "watch your words." Some people are careful of what they say on-line as their words scroll past on the screen, because on-line conferences, especially those devoted to a specific topic and contributed to by experts on that topic, are regarded by many as databases with their own intrinsic value.

As a result, an author and expert in social forecasting, who participates in an on-line network with hundreds of other people — most of whom are unknown to him — may keep his best ideas to himself for fear they will be "stolen" and credited to someone else.

"This hasn't been much of an issue so far because it's new enough and the entrepreneurs haven't come in and said, 'There's value in this,'" says Mike Lougee, professor and researcher at the University of Michigan's Center for Political Studies at its Institute for Social Research in Ann Arbor, Michigan. But, he says, "Now people are beginning to suspect there is value in these things, and they are starting to wonder what's going to happen."

"The potential exists for complicated problems," says Jennifer Bankier, an associate professor at Dalhousie School in Halifax, Nova Scotia, "because in terms of copyright, a conference is contributed to by a number of people. Besides the participants, there is the conference organizer who contributes to it and shapes it, then there's the creator of the software that makes the conference possible. The question becomes: Who should hold the copyright?"

CAROLJANHOUSE

*Copyrighting conference material presents complicated problems, says Jennifer Bankier.*

A good example of the potential for problems exists at the University of Michigan, which is considering publishing its on-line "CRLT:Micros" conference in hard copy for newcomers to the university, as a guide to both computing and the university.

Yet to be answered are several questions arising from the situation. How should the material be available to users? Should it be a reference book, unavailable for purchase, or a book you can buy? If the book can be purchased, should its price be based on publishing costs or the value of the ideas therein?

If the book is sold for profit, should the money go back to the University of Michigan? What, if any, compensation should go those who contributed their ideas to the conference?

Such concerns may inhibit some conference participants.

"I've come to believe that it's best not to put into a conference ideas I think have direct economic value," Lougee says. "In other words, don't tell secrets in conferences."

Although most conference participants are experienced enough to consider what they say to be in the public domain, a few have indicated they thought they were speaking "only to a few people," Lougee says.

To some users, the value of information in a conference is not an issue. "We see conferences as public channels, as a public exchange of information," says Richard Baker, director of corporate communications for CompuServe.

"The information in a conference is the same as information given over the phone or on television," he says. "It's a communications medium for the exchange of ideas." Regarding ownership in the case of someone wanting to publish electronic messages in book form, Baker says, "Again, it's the same as information transmitted by phone or another medium. I don't think computers and communications networks are unique."

One company that profits from the value of electronically transmitted ideas is FYI Inc., in Austin, Texas, which has long marketed text information retrieval software, primarily to the medical and academic worlds. Recently it introduced FYI 3000, a $395 program for IBM PC and Kaypro computers that can index an existing database by keywords specified by the user.

FYI is working with the University of Michigan to manage several of the university's on-line conferences. Lougee says that with a program such as FYI 3000, a conference would become more valuable as a resource, because users could immediately find all references to a particular topic of interest. The usual long, rambling string of comments and responses would become much more usable and cohesive.

Who gets the money if a conference is later sold as a product? "It's quite a tricky problem," says Bill Brogden, a founder and research director of FYI. "Presumably there is some way to negotiate ownership."

It seems that on-line conference participants would insist on signing releases before allowing their material to be used,

according to Brogden. "If I found that some of my offhand comments had gotten published in a database, I'd get a little annoyed."

Participation Systems Inc. of Winchester, Massachusetts, has a product that is "a combination of communications capability and database," says the firm's president and founder, Chandler Stevens. Participate is a computer conferencing system offered through The Source that has the advantage of storage and branch-

WILLIAM HURD JR.

*Chandler Stevens of Participation Systems*

ing capabilities, so that users reportedly can find topics of interest more quickly than in a traditional on-line conference.

The software, now also available for in-house minicomputers and mainframes, makes possible situations that clearly illustrate the problems of proprietorship. "One of the powers of the software is the way it supports the creative process," Stevens says. "Creative thinking is enhanced because you are interacting with your peers and with sources of expertise that you didn't even know existed. Creative ideas build very fast, and it would probably be difficult to ascribe ownership to them."

In a recent series of electronic lectures by prominent writers and thinkers using Participate, the lecturers asked participants for responses to their ideas, which may well influence any subsequent publication of those ideas in book form. Some respondents put copyright notices on their reactions, Stevens noted.

But at this point, most participants don't bother to copyright what they put into a conference, and conference organizers don't bother to copyright the conference as a whole. "Computer conferencing is built strongly on trust," says one participant.

For many, copyright protection is anathema to electronic conferencing. After all, electronic networking is based on the free and easy exchange of information, not on attitudes of secrecy, mistrust, and self-interest.

Therein lies what could become a serious problem. Naivete and carelessness may spawn future discontent. "Over the next five or 10 years, as people become more and more involved in selling pure information for profit, I would expect to see additional claims against ownership," says Jack Russo, a computer/copyright lawyer with Fenwick, Stone, Davis & West in Palo Alto, California.

The Copyright Act of 1976 (which became effective in late 1978) says that any electronic message in a conference is implicitly copyrighted in the name of the person who inputs it, whether or not it includes a copyright notice.

If no notice is included, however, others can use the material with impunity, and if the writer of the entry does not affix a copyright notice within five years, the writer forfeits the right to a copyright.

If a third party decides to publish the entire conference in hard copy and sell it for profit before the five-year limit, the third party is considered an "innocent infringer" because the absence of a copyright notice suggested the original writer was unconcerned about ownership.

At that point, the writer cannot sue the publisher, but can send the publisher a letter explaining that he or she intended copyright protection. The third party then must stop publishing the work.

The writer must also make considerable effort to affix copyright notices on everything already published without the notice, as well as make his or her original intentions generally known. He or she could, for example, put a notice in a newspaper.

"In practice I don't think anyone will sue anyone else if comments made in a conference aren't libelous, because there isn't enough money at stake," Bankier says. "We're still some time away from property suits." Instead of actual lawsuits, Bankier foresees "more arguments arising regarding proper behavior and the evolution of a new social etiquette."

The social etiquette surely hasn't arrived yet. "I'm sure there are lots of consultants in the computer industry who get on-line and read all the bulletin boards, learn a ton of information for free, then hire themselves out at $100 an hour," Lougee notes.

"I expect there will be more and more lawsuits and ownership suits as this evolves," Brogden says. "It's almost inevitable that the copyright laws will be extended to electronic distribution."

Some think the industry should address the issue before Congress does. "The last thing I would want to see is premature lawmaking by people who don't understand the medium, based on holdover notions about what copyright meant in the days of the printing press," says Stevens, a former Massachusetts legislator. □

# COMMUNIQUES

**More international news:** Nexis, an information retrieval service, has added to its news base the Interlink Press Service, known particularly for its coverage of Third World nations.

Interlink, the exclusive U.S. distributor for Inter Press Service, an international-news wire service based in Italy, will provide Nexis subscribers with a variety of information on economic, political, financial, human rights, environmental, energy, and development issues.

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# MAINFRAME SAVVY FOR MICROS

## *Fourth-generation languages move to personals*

BY DORAN HOWITT
*Senior Writer*

Mainframe software producers, who for years have been eyeing the lucrative personal computer software market, are starting to tackle part of it — database managers — with microcomputer versions of mainframe products. Powerful computer programs called "fourth-generation languages," based on the latest in mainframe database managers, are making their way into personal computers, promising to offer more power than other database software available for microcomputers.

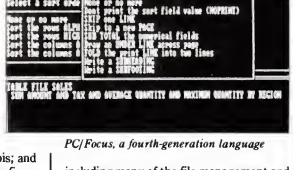
Makers of fourth-generation languages face several obstacles, however, including fierce competition for potential buyers' attention. The languages also need more costly hardware than popular database management products. The leading microcomputer-based fourth-generation language requires a hard disk machine like IBM's PC XT and 512K of random-access memory, and many of its competitors run on an even more expensive machine, IBM's XT/370 — a desktop version of the company's mainframe computer.

The *fourth-generation* moniker first appeared in a data processing trade magazine in 1981 and since then has gained wide currency. (The first generation of software was machine language, the second was assembly language, and the third was "high-level" languages such as Fortran and Cobol.)

Information Builders of New York has made the most ambitious commitment so far to transporting fourth-generation languages into the microcomputer realm. Last year it released its successful Focus mainframe software to run on the IBM PC XT. In June it announced versions for the Wang Professional and Texas Instruments Professional computers.

Focus, as a mainframe product, costs $110,000. Nearly 1,200 organizations — accounting for about 150,000 individual users — have bought the mainframe version of Focus since its introduction in 1976. Personal computer users can now buy PC/Focus, a personal computer version, for $1,595. Information Builders says it already has sold about 5,000 copies of the new product.

Depending on how one defines a fourth-generation language (see related story on Page 37), anywhere from 10 to 50 software companies are preparing such products for the personal computer marketplace. Focus' major competitors in the mainframe market include Ramis II, by Mathematica of Princeton, New Jersey; Inquire, by Infodata Systems of Pittsford, New York; Nomad 2, by Dun & Bradstreet Computing Services of Wilton, Connecticut; Adabas, by Software AG of Reston, Virginia; Sir/DBMS, by Scientific Information Retrieval of Evanston, Illinois; and numerous others. These and other firms have personal computer versions of their software in the works.




*PC/Focus, a fourth-generation language*

There's no consensus, however, about what constitutes a fourth-generation language. "There's a lot of ambiguity in this term," says Capers Jones, consultant for Nolan, Norton and Co. of Lexington, Massachusetts. "Because of the glamour of the phrase, a lot of things are being advertised as fourth-generation languages that may not be. I see about 15 or 20 products each year switch over to this phrase."

"It's a zoo to try to pin down what a fourth-generation language is," says Tom O'Flaherty, director of software programs for Input, a Mountain View, California, research and consulting firm specializing in the information-processing industry. "I consider a fourth-generation language to be a program that is accessible to users of information rather than computer professionals. Many so-called fourth-generation products are aimed at users only in brochures. In reality they are properly called 'application generators' — meant to support complex data processing activities that the data processing staff would handle."

All of these languages are "procedural," meaning that the language is used to instruct a computer step-by-step how to perform a certain function. "Fourth generation" refers to a way of telling the computer *what* to do without specifying *how* to do it. If a task requires 100 lines of instructions in Cobol, it might need only five or 10 in a fourth-generation, or nonprocedural, language.

By this definition, of course, most newer personal computer software packages would qualify as fourth generation, including many of the file management and spreadsheet packages on the market. (In the mainframe world, "user-friendly software" was — and still is — a novelty that warrants a special name.) Today, the advantage of fourth-generation languages over other microcomputer programs is mainly their power and varied functions.

Information Builders says that PC/Focus works exactly like the mainframe Focus and offers all the mainframe's capabilities and features. The main differences, from a user's standpoint, are the size of files that one can manipulate and the speed with which the program executes instructions.

Fourth-generation languages offer several advantages over the popular database management programs available for microcomputers. For example, Ashton-Tate's D-Base II — today's leading product in this market — is noted not only for its great adaptability but also for being complicated to use. The product, in fact, contains a procedural language, whereas the essence of fourth-generation languages is their nonprocedural nature.

Fourth-generation languages generally also allow users to acquire computerized information directly from many mainframe sources. This could be a significant advantage to workers in a company using mainframe data processing.

Fourth-generation languages also allow both hierarchical and relational databases; D-Base II is strictly relational. The relational database is the most modern and generally the most straightforward to use, but hierarchical structures are often advantageous because they reduce the amount of memory required to store a certain amount of information in a particu-

lar record. Focus, for example, includes a choice of three database structures: relational, hierarchical, or network. A special language can be used to locate information whenever users need it and it is received automatically formatted. The package has the capability to create reports automatically, generate graphics displays, and do statistical analysis and financial modeling. It also has data security and password features, transaction processing routines, and an interface to mainframe databases written in a variety of competing languages. The command vocabulary is under 100 words.

The ubiquity of D-Base II, however, has spawned a subindustry of companies writing programs that extend D-Base II's capabilities. For example, Fox & Geller Associates of Elwood Park, New Jersey, offers D-Graph, a program for making charts from D-Base II files, and Quickcode, which supplies a menu-driven front end for D-Base II. "You could say that D-Base II together with a number of add-ons gives you a program very competitive with Focus," says George Schussel, president of Digital Consulting Associates in Andover, Massachusetts, which runs seminars on fourth-generation languages.

Although Focus and its competitors have "financial modeling" components, their spreadsheet qualities do not compare to microcomputer spreadsheets such as Lotus' 1-2-3. Users cannot build or alter a Focus financial model cell-by-cell as they can with spreadsheet programs. Rather, they must specify row names and their contents in a separate set of definitions. The program then builds the desired spreadsheet.

Focus is the only fourth-generation language so far to be "ported" to run under PC- or MS-DOS. Most of its competitors are introducing versions that run on IBM's new XT/370, an enhanced PC that can run programs written for IBM's 370 series mainframes. Others are taking a slightly different tack. Infodata, creator of the fourth-generation language Inquire, which competes with Focus, is developing a program called PC/Inquire to run under PC-DOS. PC/Inquire is not identical to its corresponding mainframe product, as is PC/Focus, in that it won't contain all Inquire's features.

"Information Builders invested a lot of time and money rewriting Focus to run under PC-DOS," O'Flaherty says. "The others took a shortcut by shifting the program to the XT/370. The market for that machine is an enormous question mark."

O'Flaherty points out that it is a relatively simple task to revise a program already running on IBM's mainframes to

## A FOURTH-GENERATION LANGUAGE DEFINITION

Although the term is widely used in mainframe circles, even those who regularly deal with the products disagree about the definition of fourth-generation languages. Ronald G. Ross, editor of *Database Newsletter*, published by Database Research Group of Marblehead, Massachusetts, has delineated 10 criteria for defining what a fourth-generation language is. The following list is adapted from an article Ross wrote.

**Result-oriented programming:** The user should be able to get information without being required to count lines or write "procedures" or sets of instructions to be followed. Instead — to create a report, for example — a user could specify a format for the report, page breaks, totals, and labeling information. A fourth-generation language then would translate the request into the procedural steps needed to produce the results.

**Demand-level adaptability:** A language suited only to the naive user would hardly suffice for the professional; conversely, a language aimed only at the professional would likely overwhelm the novice. The solution lies with demand-level adaptability — the ability of the fourth-generation language, through preset, assumed information and building-block techniques, to respond to the user's own level of knowledge.

**Application expansion:** The application for which the fourth-generation language is used grows over time. Once an application has been created — and results obtained and inspected — the application may be corrected or refined. This may occur many times. It is important that, as revisions occur, assumptions made by the program can be altered manually and components such as fields, subtotals, and variables can be added or substituted. In addition, a private application may subsequently become valuable to others. Thus, how to share the application effectively becomes an important issue.

**User/machine insulation:** The user of a fourth-generation language should be shielded from any awareness of the particular hardware or systems software — operating systems, screen management facilities, and so on — being used in conjunction with the language. Applications should be readily moved from one computer to another, even if the hardware or systems software is different.

**Workstation environment:** Developed procedures — completed or not — should be in a form that can be stored for subsequent use. The user should also have the opportunity to make future work easier and more streamlined by developing menus that guide another person through a complex application.

**Comprehensive software toolkit:** The fourth-generation language needs a variety of software tools, each capable of producing timely results. These include the capability to provide financial models, statistical formats, and graphics, in addition to the basic information reporting capabilities of the fourth-generation language.

**Integrated perspective on data resources:** The fourth-generation language should coordinate all database activity so that the user always interacts with the computer in the same streamlined fashion. It should allow the user to locate information — including information contained in other computers or in files created by competing database or fourth-generation language programs — in the same manner, no matter where or how it is stored.

**User database capability:** Simply put, the way a user sees information should not be restricted or tied to the way the information is represented to the computer. Files stored in one fashion should be amenable to rearrangement in any other fashion, as suits the user.

**Accessible dictionaries:** Users should easily be able to build a "dictionary" of information about where data is and how it is defined. This should be tied to the reporting facility so that a user can't use an incorrect definition when creating a custom report.

**User assistance:** To assist the private user, the fourth-generation language should provide on-line help facilities and some ready-to-use complex functions. It must also be able to account for all usage made of the information in it and keep central catalogs of protected procedures and databases.

run on the XT/370. Unfortunately, such a program won't run on the hundreds of thousands of PC XT computers now on the desks of American business people. The XT/370, announced last October and only now beginning to be shipped in volume, costs $9,000 for a basic system. An IBM PC XT can be upgraded to an XT/370 for $3,790. An IBM spokesperson says the XT/370 is aimed at programmers, engineers, and scientists — not typical business users, who are the main customers for database management programs.

Most companies introducing fourth-generation languages plan to concentrate their marketing efforts on their present corporate market — organizations that run their mainframe programs. Will this undercut sales of mainframe fourth-generation languages? That appears unlikely. A mainframe program that costs perhaps $50,000 may be used by 50 people in an organization. That averages out to $1,000 a person. Microcomputer-based fourth-generation languages are designed to support only one user, so selling them for $1,000 doesn't necessarily represent lost revenue.

On the contrary, these software producers see PC versions as vehicles to expand sales incrementally to current and potential mainframe customers. This can give the customer a chance to "audition" the software, or grow into it gradually, by buying several copies of the personal computer version before making a purchase for the company's mainframe. Once an organization has perhaps five or 10 such copies installed, the producers anticipate, it will be likely to upgrade the purchase to a minicomputer version, or to a larger mainframe if it already runs the fourth-generation language on a mini.

Can fourth-generation languages conquer the mass market in quantities approaching those of D-Base II, which has sold more than 250,000 copies? For those based on the XT/370, this possibility is tied to the success of that machine. A spokesperson at Mathematica, the producer of Ramis II and Ramis II/PC, has called the XT/370 "the major environment for future PC software." So far, though, the market has been cool to the XT/370, and too few machines are available for purchase to permit accurate judgments by experts.

Focus, the only fourth-generation language now available to run on the PC XT and similar machines, seems to have more potential to capture a wider market. Information Builders has said it will pursue retail sales of Focus "selectively" through "high end" stores that sell to businesses.

As part of its strategy targeting personal computers, Information Builders has added some features to PC/Focus that aren't currently available in its mainframe versions. This set of menus, called Table Talk, allows an inexperienced user to query existing databases and create reports without having to learn Focus' query commands.

Mathematica has implemented an even more sophisticated system with its Ramis II English facility based on artificial-intelligence principles. It dispenses with menus and converses with the user in plain English. Ramis II English can understand a series of commands such as, "Give me the total units sold to each customer," or "What were the average [number of] units also? Include the max and min units as well." If the user types a phrase unknown to Ramis, it asks for a definition. Ramis II English is available as an option on Ramis II/PC for the IBM XT/370.

Makers of fourth-generation languages hope their mainframe technologies can crack the seemingly crowded personal computer market. Given the strength of the established microcomputer products, it won't be easy. But the mainframe publishers seem likely to give the high-end database products some tough competition. □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*Scott Mace*

# A PROSECUTION COMPLEX

I continue to cast about for new and different settings for computer games. I may have found one — the courts. If you have found yourself as intrigued as I have been by the sight of a judicious grown man (Judge Wapner) trying real people on TV ("The People's Court"), I have a game for you.

It's called Jury Trial II by Navic Software; $49 for IBM PCs with advanced Basic, Apple II computers, and the Commodore 64. A color monitor is recommended but not required. Navic is in North Palm Beach, Florida. You can call the company at (305) 627-4132.

This is a two-player game. You and a friend are playing courtroom — one of you is the prosecutor and one is the defense attorney. The computer acts as housekeeper, bailiff, judge, and referee. The two human players pick a six-person jury for each trial. These are chosen from 12 of the oddest oddballs ever assembled.

The game is not without its faults. I tried the IBM PC version and found the game slow and cumbersome at times. But what the game lacks in polish, it makes up in originality.

Your mission is to get the jury to return a verdict of guilty if you prosecute, not guilty if you defend.

The cases start something like this: "A mugging occurred at 84th Avenue and 85th Street on September 13, 1982. The time of the incident was 4:48 p.m. Purse with $3,000 in jewelry missing. A suspect has been arraigned. He pleads not guilty to the charges. Do you wish to prosecute this case?"

Like any computer game buff, you answer yes. You quickly find yourself in the office of the sheriff. (At least that's what you are told; this game uses text to describe the sheriff, who is a good ol' boy, and his office.) The Jury Trial II manual advises you to stick to questions about the suspect's appearance, weapons confiscated, and any identifying features on the suspect. You are likely to get an answer such as, "The only distinguishing feature we know of was a tattoo on right arm." At other times the sheriff just rambles on: "We're not all smart enough to be hotshot lawyers y' know. Your [sic] not really serious about that question, are you?"

This is the crucial area of the game, though it certainly isn't the crucial area of the law. You have to know what questions to ask and what details to cover. The sheriff won't tell you anything about the suspect or the crime if you don't ask. Since you and your opponent take turns asking questions, you have to think about your next question while the opposition is asking his.

At last the cop gets impatient: "Better hurry it up, folks. Just a couple more questions, then I go back on duty."

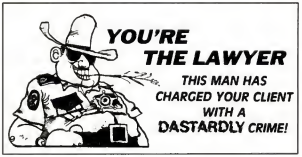
Then, on to the courtroom for jury selection. Some prospective jurors, like Brutus Hawgg, will make any defense attorney blanch. "A confirmed bachelor, he drives a pickup truck and owns 2 Dobermans, which guard his liquor store at night. His store has been robbed 3 times. The first two times, suspects were tried and released for lack of evidence. The third time Hawgg shot and killed the burglar with a pistol he keeps behind the counter." To keep the prosecutor uneasy, there are folks like Esmirelda Eubank, who "loves all God's creatures. She feels that faith can bring out the good in anyone."

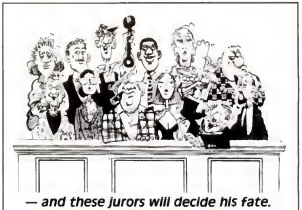
At the beginning, no juror is seated unless both attorneys agree. Each side is allowed only three preemptive challenges (dismissal of a juror without cause). Soon the six-person jury is seated and each side calls its witnesses. You play the witnesses, recanting your facts, figures, and descriptions, filing short "depositions" and generally trying to beef up your case.

Each player can object to a question by pressing the space bar as soon as the question appears on the screen. The computer will sustain or overrule the objection. If the prosecution is faring badly, the judge can send you back to the sheriff's department for more information. "Don't tell me that bum's not in the slammer yet," the sheriff will say.

At the end will come the verdict — and the suspect will go behind bars or walk free. You won't be rated on how well you did any other way — there are no points given.

Jury Trial II hinges on knowing the right words at the right time; there are no places for eloquent speeches or impassioned closing arguments. I consider the program a proposal for more interesting simulation of the cops-and-robbers game that is our law system. Love it or hate it, it's the only one we've got. □



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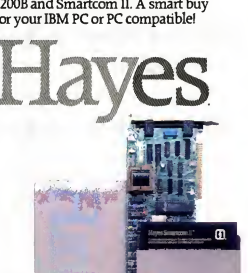


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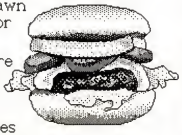

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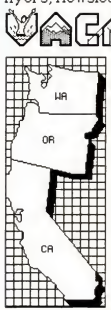


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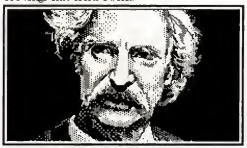

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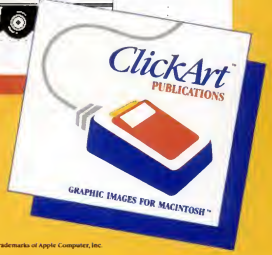


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# THE ARRIVAL OF THE 256K CHIP

*The next step in the evolution of the semiconductor*

BY CHRISTINE McGEEVER
*Reporter*

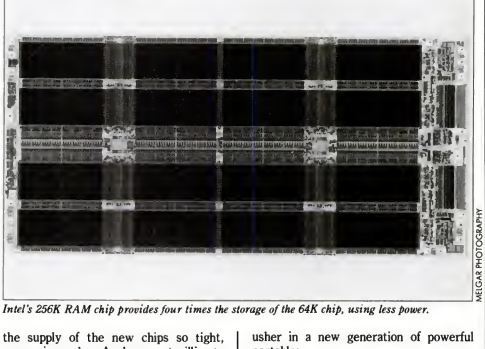
In June, Intel Corp. introduced a new 256K, low-power random-access memory (RAM) chip that it said would revolutionize the personal computer market. Shortly thereafter, representatives of National Semiconductor told a group of reporters that it would also produce a 256K RAM chip. In the same month, Compaq Computer Corp. announced that Compaq owners could bring their machines into a dealer for a memory upgrade with 256K RAM chips. The new chips would also be standard on the Compaq Deskpro Model 4 that was introduced the same day.

At first glance, it appears that Intel's 256K revolution is upon us. The 256K dynamic RAM chip provides four times the storage capacity of its predecessor, the 64K chip. It uses less power and allows denser packing of chips onto a board without the danger of overheating.

According to industry experts, the 256K chip is more evolutionary than revolutionary. It is the "obvious and good next step on the upward evolutionary scale," says David Wilson of Future Computing in Dallas. The chips are evolving slowly — few are on the market now, and no one is sure when there will be enough to go around. Nonetheless, speculation about them is creating excitement about what the larger devices will do for personal computers.

The first 1K chip was manufactured in 1973. By 1977, the 4K chip was the big seller, followed by the 16K chip in 1980. The current industry standard, the 64K chip, was introduced in 1981, just in time for the release of the IBM PC.

The 64K chip, Wilson says, will peak in sales this year and give way to the 256K chip. Apple's Macintosh, which in its current form contains 128K of RAM, was designed with the 256K chip in mind. A future upgrade will replace the 128K with two 256K chips. A loaded "Fat Mac," as the 512K machine has been dubbed by the few developers lucky enough to have one, will be able to run an integrated software package similar to Lotus' Symphony. Macintosh product manager John Rizzo says that he expects the embellished machine to attract a number of such products, including one from Lotus. With the supply of the new chips so tight, companies such as Apple are not willing to discuss suppliers. Rizzo would not say who will make chips for the Fat Mac. Apple expects the chips to be in production by the beginning of next year.



MEGAR PHOTOGRAPHY

*Intel's 256K RAM chip provides four times the storage of the 64K chip, using less power.*

Hardware designers like the new chips because they save space. Whereas one megabyte of microcomputer memory requires 128 of the current standard 64K chips, the same result can be achieved with only 32 256K chips, saving substantial space on the computer's main circuit board.

Intel's entry is of particular interest to makers of lap-size portable computers. The low power consumption and high capacity of the chip could give a lap portable the capability to run more sophisticated and demanding software packages now limited to desktop machines. Although previous chip technologies managed to scale down the design of chips, the power required went up. Dissipating the energy used to run the chip generated heat, so much heat that the chips became too hot to run without ruining the information stored on them. The new Intel chip is built with complementary metal-oxide semiconductor (CMOS) technology, which allows it to use one-twentieth of the power required by earlier chips. The chip is considered ideal for lap portables, and Intel believes it will usher in a new generation of powerful portables.

"It will give you the memory of a desktop and therefore the ability to run the same software as a desktop," says Charles Hart, Intel product line manager. "It will make it cheaper to do it."

***The 256K chip may herald a new generation of lap-size portables.***

"Tremendous power is available in a portable with the 256K RAM," says Pat Brooks, Intel's product manager for the 256K chip. "Portables will be as commonplace as the ubiquitous calculator. The first [true] portables are now hitting the market and must be in CMOS."

Like Apple, Intel is reluctant to discuss companies interested in the chip, though Brooks says IBM, which owns 20 percent of Intel, is "moderately interested."

The market for the 256K chip "is in the infant stage," he says. "It's just now starting to get going, now that the pieces

of the puzzle are becoming available." Intel says the current market is one-tenth of what the worldwide market will be in 1988. As small as the market is now, Brooks says, it is international and highly competitive.

"The people who are out front right now are the people you would expect — the Japanese," Brooks says. Two Japanese chip makers, Fujitsu and Hitachi, control 90 percent of the current market. They have combined sales of 15 million units to date, an amount worth approximately $450 million, according to Brooks.

But the Japanese make a slightly different product. Their chips are made using N-channel metal-oxide semiconductor (NMOS) technology. NMOS chips use too much power to lend themselves to portables. Only one Japanese firm, OKI Semiconductor, is approaching production stages of a CMOS chip.

The first products to use Fujitsu's 256K chip are expansion boards for machines like Fujitsu's own desktop, the Micro 16s. The machine was manufactured 18 months before the chip was available in large quantities, according to Wayne Clingsmith, director of engineering for microcomputers at Fujitsu. The new 32-chip expansion board, which costs $2,000, provides a megabyte of RAM and occupies a single expansion slot in the Micro 16s. A comparable memory made of 64K chips would cost about the same, Clingsmith says, but would take up two expansion slots. Clingsmith says that an advantage of the high-capacity chip is that fewer chips in a machine mean fewer potentially faulty chips, a savings in space and reliability.

A symptom of the infant market is the chips' inflated price. Intel 64K RAM chips cost $20 to $40 in mass quantities to computer manufacturers, and the 256K RAM is priced as if it were four of these chips — from $80 to $160. The cost, expected to drop when shipping quantities rise, simply isn't competitive.

"The price will come down when someone makes them bring it down," says Lane Mason of Dataquest, a market research firm in San Jose, California. More manufacturers will have to compete for the limited market before the 256K becomes less expensive, he says. By the same token, computer manufacturers have to be more interested in buying larger quantities for more of the chips to become available.

Lee James, vice president and general manager of Regis McKenna Public Relations, a Palo Alto, California, firm that has represented Intel since 1972, predicts a growing market for the chips. "There aren't any major buyers now because it's just too early," says James, who has observed the semiconductor business for eight years. A major buyer receives about 1 million chips a year. "At this stage," he says, "you're finding people buying hundreds, maybe thousands, and running tests taking four to six months."

In 1982, according to James, approximately 10,000 units were shipped. In 1983 the number increased to 1.7 million, enough to support two major buyers. In comparison, 400 million 64K RAM chips were shipped in 1983.

In the United States, Texas Instruments, Motorola, and Mostek, in addition to Intel, have 256K chips available. IBM, which will have a larger portable on the market later this year, is licensed to make an Intel 256K NMOS RAM chip.

In Japan, Hitachi and Fujitsu are accompanied by Toshiba, Mitsubishi, and NEC in production of 256K RAM chips and are "far and away the leaders" in NMOS, says Wilson of Future Computing. OKI Semiconductor has samples of CMOS 256K RAMs. Siemens, based in Germany, is producing a similar chip. "It seems unlikely that Intel will have the CMOS market wrapped [up]," he says. "It's a very dramatic competition." □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In draft mode, the printer has a stated capacity of 86 characters per second in six character sets: pica, expanded pica, elite, expanded elite, condensed, and expanded condensed. The nearly letter-quality mode operates at up to 43 characters per second in 12 character sets: pica, expanded pica, elite, expanded elite, italic, expanded italic, superscript, expanded superscript, expanded subscript, subscript, proportional, and expanded proportional. The draft mode uses a 9- by 8-dot matrix; the better-quality mode uses a 9- by 16-dot setup.

A self-test mode permits you to diagnose printer faults. The compact printer is available in versions compatible with machines from Commodore, Atari, and Texas Instruments. An IBM PC version is also available. The price for the standard model is $299; with built-in interfaces, the cost is $319.

Axiom Corp., 1014 Griswold Ave., San Fernando, CA 91340; (818) 365-9521.

**High-resolution graphics for the TRS-80 Model 4:** An add-on circuit board for the TRS-80 Model 4 can provide the computer with a graphics resolution of 640 by 240 pixels. This creates 153,600 individual points on the screen that can be rearranged at the whim of a program. The Grafyx Solution fits completely within the computer and simply plugs into the graphics connector.

A diskette, supplied with the board, contains more than 40 programs and files of graphics software. The functions of these programs vary from making the board easier to use to providing practical graphics applications, the manufacturer says. The programs are compatible with the TRS-DOS 1.3 and 6.1, L-DOS, NewDOS80, and DOS-Plus operating systems.

The board also comes with an extended graphics Basic that adds more than 20 commands to the Basic programming language. The commands will set, clear, or complement points, lines, boxes, circles, ellipses, or arcs. Areas may be filled with any of 256 patterns. Sections of the screen may be saved and replaced using any of four logical functions.

The display produced by the high-resolution board can be printed on any of 20 available printers.

The price is $199.95 from the manufacturer.

Micro-Labs Inc., 902 Pinecrest, Richardson, TX 75080; (214) 235-0915.

**Hey, Alvin!** The Chipmunk is a portable 3½-inch disk drive for the Radio Shack Model 100 and Olivetti M10 lap computers. The Chipmunk comes ready to plug into the computer, and no software installation is reportedly required. Disk Basic and a simple menu-driven operating system come with the Chipmunk for use with the disk drive. Power is provided by either built-in rechargeable batteries or an AC adaptor.

The Chipmunk is small enough to fit into a briefcase along with the lap computer; additional Chipmunk disk drives may be plugged into the first to increase storage capacity. With connecting cables, manuals, and disk, the drive sells for less than $550.

Holmes Engineering, 5175 Greenpine Drive, Murray, UT 84123; (801) 261-5652.

*Carol Ranalli*


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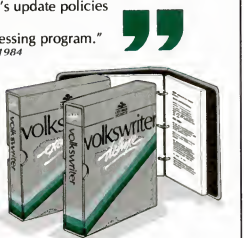


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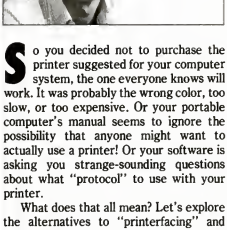
*Steve Gibson*

# A BIT OF PRINTERFACING



So you decided not to purchase the printer suggested for your computer system, the one everyone knows will work. It was probably the wrong color, too slow, or too expensive. Or your portable computer's manual seems to ignore the possibility that anyone might want to actually use a printer! Or your software is asking you strange-sounding questions about what "protocol" to use with your printer.

What does that all mean? Let's explore the alternatives to "printerfacing" and make sense from the nonsense.

You may have heard this question before: "Is it a parallel or a serial interface?" You may have even asked the question without fully knowing what the answer would mean.

Years ago, when minicomputers were all the rage, a company called Centronics was a dominant printer manufacturer. The bright boys there designed a very sensible, inexpensive, and efficient way of wiring their printers to other computers. This was the Centronics *interface*. The company sold so many printers that computer manufacturers began to put that kind of interface on their computers, and other printer makers began copying what had become the Centronics "standard."

The Centronics interface is called a parallel interface because the 8 bits (1 byte) of information representing the character to be printed are presented to the printer on eight separate wires all at once — in parallel.

But 8 bits of data are not always available in parallel. For example, whenever communications are involved — across the city or across the country — information is transferred as a serial stream of single bits, one after the other.

*Steve Gibson is president of Gibson Laboratories of Irvine, California, and the developer of the Gibson Light Pen.*

When a printer is connected to a modem, or to a serial (communications) port on a computer, it must have a serial interface.

Remember those old, clanky, slow teletype terminals? They used a serial-style interface known as *current loop*, but that has been displaced, in modern computer systems, by the RS-232 serial interface standard. (See Behind the Screens, July 2, 1984.)

Printers are slower than computers. The biggest problem facing the computer/printer marriage is the printer's inability to keep up with the computer's high rate of information transmission. Somehow, the printer must govern, or throttle, the computer's data flow. This is where protocol comes in.

Centronics designed its parallel interface with a built-in throttle protocol. As the computer presents each byte of character data to the printer, it also activates a signal known as a *strobe*. This strobe informs the printer that the data for a new character is waiting (in parallel) on the eight data lines. The computer monitors a returning signal, called *acknowledge*, that the printer sends when it has accepted the data. Because the printer will not acknowledge a new character until it has digested the current one, this simple yet clean scheme allows the printer to operate at its maximum speed while regulating the rate of the computer's transmission.

***Those old, clanky, teletype terminals used a serial-style interface.***

Strobe and acknowledge systems of this sort are known as *hardware handshaking* protocols.

A variation of this hardware handshaking can also be applied when using an RS-232 serial interface with devices connected locally with wires rather than remotely through modems. One of the signal wires in the RS-232 specification is called *clear-to-send*. By agreement, the sending device (the computer) must stop transmitting data whenever the receiving device (the printer) is not returning the clear-to-send permission. This approach requires extra wires beyond those used for the data transfer.

When operating a printer remotely, through a telephone and modem, no physical wire connection is possible, so a different scheme must be used.

In practice this is quite simple, but it requires a "smarter" printer than do the previously described schemes. When the printer, receiving data, is not ready for more, it sends a special character known as "XOFF" (pronounced ex off) back to the computer. The computer, receiving the XOFF, immediately suspends data transmission and begins waiting for an "XON" character from the printer. The XON is sent by the printer when it has caught up with the data received from the computer and is again able to accept additional data.

A printer operating with this software handshaking requires more smarts for two reasons. First, the generation and transmission of the XON and XOFF characters is much more complex than just removing the clear-to-send signal in a "wired" serial connection. Second, because a few characters might be received by the printer before the computer is able to receive and respond to the XOFF command, the printer must have a storage buffer to hold those extra characters. In practice, because every printer sold today has a microprocessor, with some RAM and ROM, hidden somewhere in its innards, the brains and buffer requirements are readily met.

The XON character is the ASCII code Control-Q; XOFF is Control-S. Most computer systems obey this same software handshake protocol so that typing Control-S (XOFF) at the keyboard will halt transmission of information to the screen and Control-Q (XON) will resume it.

Now you're ready to boldly go where no personal computer owner has gone before — and hook up that weird printer to your own personal computer!

(On a personal note: an extremely tight software deadline has forced me to temporarily suspend my column. This will be the last Behind the Screens for several weeks, until the project is finished. But I will return.) □

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# A NEW ATARI CORP.

## *The house that Jack Tramiel emptied*

**BY SCOTT MACE**
*Senior Writer*

It would be unrealistic to call Jack Tramiel the savior of Atari, since the company he bought and now directs bears little resemblance to the Atari that Warner Communications owned for eight years.

Gone is James Morgan, the thin, energetic fix-it man brought in from Philip Morris last September as Atari sales

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*Jack Tramiel became chairman and CEO of Atari after buying the firm, with investors, in July.*

sagged and the video game market ran out of steam. Also gone are an estimated 800 employees who survived Morgan's desperation layoffs last spring. Remaining are about 300 employees, hand-picked by Tramiel and his lieutenants to carry the company into its next chapter.

Tramiel is determined to see that it won't be Chapter 11, and he has said and done harsh things to turn around a company with an estimated $400 million in uncollected debts.

Gone are the days when Atari of Sunnyvale, California, was associated with the laid-back California culture of hot tubs, rap sessions, and drugs. In an interview with the *Toronto Star*, Tramiel was quoted as saying, "I'm going to change this company from a democracy into a dictatorship."

Earlier, Tramiel told *InfoWorld*, "What this company needs is strictly management." And he took immediate steps to install managers of unquestioned loyalty to himself. Three of them are his own sons. Gary Tramiel is in charge of collecting unpaid debts, Sam Tramiel is president, and Leonard Tramiel now oversees software at Atari Corp. Tramiel named himself chairman and chief executive officer.

The appointments fueled speculation that Tramiel left Commodore, the company he founded and built into the No. 1 home computer maker, because chairman Irving Gould denied Tramiel's request to put his sons in top positions.

Tramiel pared Atari's employee rolls to those of a start-up. Some of the workers who received layoff notices stole equipment as they were packing to leave, according to several sources, who said such moves were more in anger toward Warner than toward Tramiel. But the microcomputer industry in general is optimistic about the new Atari, saying, in effect, if anybody can save Atari, Jack can.

In buying Atari, Tramiel did not buy technical experts — virtually all of the original Atari hardware and software designers had left the company already, and most of the few remaining were laid off. And he did not buy a company with any runaway new products — both the Atari 7800 Pro System, an advanced video game machine, and the 1450XLD, the unnamed successor to .Atari's high-end computer — were met with an unenthusiastic reception at the last Consumer Electronics Show.

Analysts say what Tramiel has bought is the Atari name, which has a high recognition factor among the American public, especially the estimated 16 million owners of Atari video game machines. Tramiel says the new Atari products will be "fun and entertaining" — adjectives ascribed to the best of Atari's video games over the years.

Tramiel also gets whatever projects were left hanging around the Atari labs. Under Warner, the company had a notorious reputation for developing fascinating prototypes of products that never reached the market. Among the more recent lab works were a series of intriguing custom chips that performed in ways never before seen in home computers. One such chip, dubbed "Maria," reportedly is capable of playing music in 16 different voices at once. Maria can also imitate an opera singer, one source says.

Atari had similar projects in computer graphics, investigating cartoon-level animation that would remove the jagged lines and sluggish movement of today's video game characters.

Before he left Atari this spring, chief scientist Alan Kay reportedly had developed an interactive videodisc system for the company.

Atari apparently couldn't decide what to do with all its lab toys. In recent months, according to one research engineer, the company waffled between making its next generation of computers with a 16-bit chip or a 32-bit chip. Rumors persist that the company will announce an IBM PC-compatible home computer, but company insiders and analysts say the project has been dead for some time. Analysts also discount recent rumors that Atari would market a computer with the MSX operating system, a home computer standard in Japan. It's more likely, they say, that Tramiel will try to exploit

whatever inventions and patents are left at Atari.

Tramiel is consolidating Atari's few remaining manufacturing facilities. Hardware production has moved from El Paso, Texas, back to Sunnyvale, and software production is moving from El Paso to Taiwan.

Tramiel says Atari will build personal computers for homes and schools, but not for offices. He takes issue with former Atari CEO Morgan's contention that personal computers aren't useful yet. "Computers are much more useful than cigarettes," Tramiel says with a laugh, referring to Morgan's previous career at tobacco conglomerate Philip Morris. "A couple of years ago, I predicted that in 1987 the personal computer market would be 50 million computers a year," Tramiel says. "This year, there might be less computers sold than the prior year. The only reason is a shortage of components."

One of the reasons why Tramiel is a force to be reckoned with — and why Atari may one day be an industry leader again — is Tramiel's ability to get electronic parts for his computers cheaper than anybody else. Between the time he left Commodore in February and the time he bought Warner, Tramiel traveled extensively in the Far East. Sources say it was to set up manufacturing facilities for his new company, Tramel Technologies Inc. Little was known about this company before July, when Warner Communications, in its announcement of the Atari sale, said Tramiel and unnamed partners had invested $75 million in Tramel Technologies. "It's safe to say Tramel Technologies now becomes Atari Corp.," says Atari spokesperson Bruce Entin.

Tramiel, who has described business as war, was born in Poland in 1928 and was sent to Auschwitz during World War II. After the Soviet army liberated the camp, Tramiel worked for the U.S. Army, then moved to the United States, where he set up a typewriter repair shop.

Soon he was assembling typewriters, not repairing them. He founded Commodore Business Machines in 1955, making typewriters and adding machines. Investor Irving Gould helped underwrite Commodore's expansion and became chairman of the board. When the electronic calculator arrived in the late 1960s, Tramiel and Commodore were ready to take the lead.

Tramiel envied and imitated autocratic, efficient Japanese management methods, and his sense of where consumer electronics markets were going has been uncanny. As he created enemies with his hard-hitting business methods, Tramiel made believers out of others. Employees of his at Commodore spoke of the "religion" inspired by Tramiel: to make products at the lowest possible cost and pass on the savings to consumers.

With calculators dropping in price from $1,000 to a few dollars, Commodore swerved into the microcomputer business in 1977 with the Pet. Foreign sales of the computer boomed, but Commodore's first U.S. success came with the VIC 20, a $200 computer with 5K random-access memory and a cartridge slot. It became a million-seller in less than two years. Then came the phenomenal Commodore 64, which assured Tramiel's place in microcomputer history. These two computers drove Mattel and Texas Instruments out of the home computer business and led directly to the sale of Atari.

Tramiel says Atari will still sell the present line of Atari computer products this Christmas. Analysts such as Doug Cayne of The Gartner Group, a market research firm in Stamford, Connecticut, say Tramiel needs to sell everything he's got to raise needed cash.

But right now, only Tramiel knows what ammunition he'll serve up after the holiday season. From talking to former Tramiel associates and industry analysts, a few scenarios emerge. Here they are ranked from most likely to least likely:

*Atari is known for its video games.*

• Atari could market a $1,000 computer using custom chip technology to imitate Apple's Macintosh computer, combining ease of use with high-resolution bit-mapped graphics, according to Cayne. The computer would use the Motorola 68000 chip or a new 32-bit chip from NEC. Cayne says a computer monitor would cost extra. Would Tramiel try to sell such a computer through mass market channels, which he pioneered while at Commodore? "It's hard to say," Cayne says.

• Tramiel could try to compete with Commodore at the low end. This would be risky, yet only Tramiel is given any chance of doing it successfully. Tramiel could start doing this by cutting the price of the Atari 800XL from $299 to $199 this Christmas. But Commodore could counterattack quickly. One source says the company sold 300,000 Commodore 64s in June alone,

MICHAEL CARR/PACIFIC HORIZONS

*Layoffs continued after Tramiel took over Atari.*

and it could cut the price $50 to $149 if needed. But Tramiel could try to undercut Commodore on the software front, slashing Atarisoft video game prices and other Atari software from $30 to $10 to clear out inventory. "I think he's going to try to be the Grinch that steals Christmas from Commodore," says one former Tramiel associate.

• Through his Far East contacts and the wide world of former Commodore employees, Tramiel could create a new computer with a powerful, proprietary chip. One such chip is the 65816 microprocessor, which was primarily developed by the Western Design Center of Tempe, Arizona. The 65816 is a 16-bit chip that is completely hardware- and software-compatible with the 8-bit 6502. The 6502 and its descendants are used in Apple, Atari, and Commodore computers.

David Eyes, who worked on the development of the chip at Hayden Software and is currently writing a book on the 65816, says it's "quite possible" that Tramiel would try to acquire the chip for use in a 1985 personal computer. He notes that the designer of the chip used to work for Tramiel some years ago. The principal value of using such a chip would be the computer's capability to address much larger chunks of memory, and the chip would be able to process data faster than an 8-bit chip. A remote chance exists that the computer with that chip would be compatible with much Apple or Atari software.

• Atari might concentrate on providing computers with a great deal more memory than other computers in its price range. "I'm surprised no one's come out with a computer with a megabyte [one million bytes] of memory," says James Capparell, publisher of *Antic* magazine, which covers only Atari computers. Capparell says that whatever computer Tramiel's Atari produces, all independent software producers will have to take notice.

• Tramiel could opt to sell someone else's computer. Among the possible candidates: Sinclair's Quantum Leap (QL)

# ATARI: FROM STARTING BLOCK TO AUCTION BLOCK

*The time line of Atari's history is a roller coaster ride through autocratic management, brilliant ideas, fierce competition, and failed dreams. Atari started an entire industry with a mere idea, built a $2 billion empire in 10 years, and lost it all within months. Here are highlights:*

**1962:** MIT student Steve Russell writes the first computer game program, Spacewar.

**1970:** Nolan Bushnell has an idea: Instead of playing games on a computer, why not invent a machine that plays only games? The result: the first fixed-purpose game playing machine — Computer Space, a turkey that sells only 2,000 units.

**June 1972:** Bushnell and Ted Dabney chip in $250 each to incorporate a company named *Atari*, an expression like "check" in the Japanese game of Go.

**November 1972:** Pong, the first commercial video game, is shipped. Its only instructions are "avoid missing ball for high score."

**1974:** Teetering on the brink of bankruptcy with arcade Pong, Atari introduces Home Pong. Its sales are $40 million by 1975.

**1976:** The inexpensive AY38500 silicon chip revolutionizes the game industry. Atari now has 70 competitors in the game market. Pong is obsolete. Atari, desperate for quick cash to finance the first programmable home video game, is sold to Warner Communications for $28 million.

**1977:** Atari grosses $120 million, but most of its inventory gathers dust. Atari introduces the VCS — a game machine that hooks up to a TV set.

**November 1978:** Profits dip to $2.7 million. Chairman Bushnell asks to be fired and hires Ray "The Czar" Kassar, who freezes research and development, bringing Atari back into the black.

**1979:** Former employees come back to haunt Atari as competition. Alan Miller, David Crane, Bob Whitehead, and Larry Kaplan leave Atari and form Activision.

**1980:** Atari's first home computers, the 400 and 800, are released. The industry praises both for their color graphics and sound, but the 400 gets a lackluster reception because of its flat keyboard. Sales for 1980 peak at $415 million.

**1981:** Video game players drop $5 billion into arcade games worldwide. Atari is the fastest growing company in U.S. history, dominating 80 percent of the total video game market.

**September 1981:** F.X. Grubb, former vice president of marketing at Atari, starts Imagic, designing games for the Atari VCS and Mattel's Intellivision. Imagic's Demon Attack, designed by former Atari engineer Rob Fulop, ships $30 million worth by 1983.

**1982:** Video games are in 17 percent of U.S. households. Atari sales peak at $2 billion. More than 15 million 2600 machines are sold. Pac-Man is a runaway success. Atari responds to the Commodore 64 with the Atari 1200XL, a computer that has software and hardware incompatibility problems with the earlier home computers. By June 1983, the 1200XL is dead.

**December 1982:** Warner stock falls from $54 a share to below $30 a share in seven days. Profits are down 56 percent, Warner's first decline in eight years. Atari's share of the video game market drops to 40 percent. The entire industry is forced to cut prices. Coleco produces popular Donkey Kong for home use, and Coleco Vision is an immediate hit. To compete, Atari markets the 5200 — fully incompatible with the old VCS game cartridges. Perry Odak, president of consumer electronics at Atari, is fired.

**1983:** Warner loses $310.5 million by the second quarter. Inventory and video game parts worth $10 million gather dust in warehouses.

**March 1983:** The first wave of layoffs: 1,700 employees get the ax.

**April 1983:** Atari moves manufacturing plants overseas.

**June 1983:** Atari shows a host of new products — the 1400XL, the 1450XLD, the expansion box, and CP/M module — but never ships them. An expansion keyboard for the 2600 is announced twice but never introduced. Other products, such as the light pen, are late.

**July 1983:** After big losses and questionable stock-trading activities, Ray Kassar resigns.

**September 1983:** James J. Morgan, former vice president of marketing for Philip Morris Inc., is appointed chairman of Atari. Like Kassar, he has no knowledge of the computer industry. John Farrand, head of Atari's only profitable division, coin-operated games, is promoted to president. The price of the Atari 800 computer, which had once been $800, drops to $165. Credibility suffers as nonexistent products are introduced. Twenty truckloads of games, VCSs, and home computers are found in a dump. Atari says they are defective, but critics say Atari is tossing inventory it can't sell.

MICHAEL CARR/PACIFIC HORIZONS

HUB GRAPHICS

*James J. Morgan, former chairman of Atari (top), Nolan Bushnell, Atari founder*

**November 1983:** Texas Instruments leaves the home computer industry. Atari layoffs peak at 3,000.

**December 1983:** Atari loses $532.6 million in fiscal 1983. Faced with additional layoffs, Atari assembly line workers vote on joining a union. The union loses overwhelmingly. After losing $420 million for the year, Warner Communications has a $5 million profit in the final quarter of 1983.

**January 1984:** Atari boosts to $249 the price of its 800XL computer, which is threatened by the more inexpensive Commodore 64.

**February 1984:** Jack Tramiel, who built Commodore into a $1 billion computer industry, resigns from Commodore and disappears for four months.

**May 1984:** Ataritel, a long-awaited voice-recognition answering machine/computer, is still unavailable. One of Atari's last remaining geniuses, chief scientist Alan Kay, resigns.

**June 1984:** Of an original 6,000 employees, only 1,200 remain and rumors of another round of massive layoffs abound. The expected date: July 1. Morgan says the new 7800 game machine and several games under the Lucasfilm label will "carry the company back to its former greatness."

**July 2, 1984:** Warner Communications sells Atari to Jack Tramiel and an unknown group of investors for $240 million.

*Giselle Bisson*

computer, which has been sold in England for several months but still lacks U.S. distribution. Bill Nichols, a representative of Sinclair in London, says he has heard nothing about discussions between Tramiel and the company's leaders. Founder Clive Sinclair and Sinclair Research managing director Nigel Searle were unavailable for comment. Another possibility is a machine from Amiga, a Santa Clara, California, firm that is developing a 68000-based personal computer with advanced graphics. Amiga president Dave Morse was unavailable for comment. But some analysts regard the possibility of Amiga or Sinclair deals with Tramiel as unlikely, since both companies would probably want too much money to license their technology to Atari.

• Of the long-shot school of thought is a source who says Tramiel had significant discussions with AT&T shortly before buying Atari. The source, who didn't want to be identified, says AT&T is desperately looking for a way to introduce its videotex service into the home, having discovered that its Spectre videotex terminal, being tested in southern Florida, is a flop. The source says an Atari/AT&T deal to provide home computing and telecommunications in one total package could represent the strongest threat of all to competitors.

Ultimately, Tramiel's presence will be the biggest factor in Atari's future success, for his ability to inspire his troops and put fear into the competition is legendary. At Commodore, one longtime associate of Tramiel's, who doesn't want to be identified, welcomes him back. "Our first reaction was, we're glad there's going to be some strong competition. In this end of the business, all our competitors are doing terribly. Now the game will start heating up again."

This Commodore manager disputes reports that Tramiel will avoid confronting his old company. "Jack is a man to whom revenge has a very strong meaning. If the parting between him and Commodore was not clean, I would bet he will come gunning for us."

Tim Bajarin, a market analyst for Creative Strategies in San Jose, California, agrees. "Jack will go after them [Commodore] with both guns blazing. It will impact the sales of the Plus 4 [Commodore's new computer with four built-in productivity software programs]," Bajarin says. "By buying Atari, he gets manufacturing facilities, he gets his products made, and he's able to react almost overnight. He'll probably be a significant player even by this Christmas."

Others maintain that Tramiel will go gunning after IBM and Apple, probably next year. A longtime friend of Tramiel's says there may be a "price umbrella" for Tramiel's Atari to slip under by providing computers with as much power as the Apple IIc and IBM PCjr for a lower price.

Either way, or perhaps both ways, Tramiel says his goal is to return Atari to prominence and profitability.

What isn't clear is where Atari will fit into the marketplace. "With someplace between 15 and 20 million video game players sold, the clear perception [of Atari] is of a play company," says Tramiel's friend, who adds that IBM and Apple are making such large profit margins on their computers — and have such large built-in inefficiencies — that they are a "moving target" for Tramiel. "Their executive hallways are 8 to 10 feet wide, but Jack made Commodore's 5 to 6 feet wide," he says, pointing out how frugal Commodore was under Tramiel.

It's easy to speculate on what Tramiel will do. A harder task is to actually choose the right path in the tricky world of personal computers, and the possibility exists that Tramiel will fail. Says electronics newsletter publisher Andy Seybold, "I wouldn't want to be in his shoes and have to make a decision like that. It's a hell of a time to enter this marketplace." □


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# Q&A: ELVIN BOLLET

## *'IBM is being outclassed in innovation'*

BY PEGGY WATT
*Reporter*

Elvin Bollet retired to California to be near his children and was recruited into an unexpected new job as executive director of the Silicon Valley Computer Society (SVCS), a users group for owners of IBM PCs and compatibles, based in Sunnyvale, California. He has seen the 2½-year-old, 800-member club outgrow one meeting place after another to become what he calls "the largest IBM club west of the Appalachians." Most members are in Santa Clara County, but the club also has members in 23 other states and in Australia, Holland, Mexico, and Canada.

**How did you get recruited into the SVCS?**

I was retired and had an interest in computers. I had played with them a bit previously and actually spent a year trying to write a book on an engineering computer that had no word processing program. A neighbor of mine was an early member of SVCS. I attended a couple of meetings with him and discovered the club had growing pains that were not being kept up by volunteers. I offered to take over as executive director. The club was about one year old and membership had reached slightly over 400.

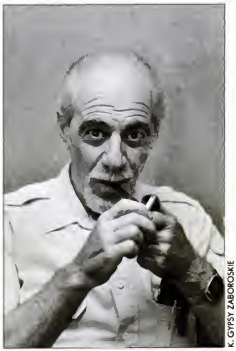
**What are your duties?**

What I have done is keep everything under control and get the newspaper out on time. I was handling meeting locations and programs for many, many months. Now we are set at one place, and we have a new program chairman. It is starvation pay, and it has become a 36-hour-a-day, eight-day-a-week job.

**What do you see as the role of the SVCS and users groups in general?**

The basic purpose is a forum for the exchange and dissemination of ideas. It starts with how-to and goes up from there. The expertise represented by our members ranges from people who have to be told how to use the on/off switch to the most expert. At our general meetings, I have yet to hear a question asked that isn't answered.

**Do you have a good relationship and communication with IBM?**



K. GYPSY ZABOROSKIE

*Elvin Bollet, SVCS executive director*

Oh, completely. We kept asking and eventually officials came out from Boca Raton [Florida] and met with our board of directors and frankly told us that they expected we would rake them over the coals, which we did. But a great number of our ideas were included in their department that cooperates with users groups.

The department publishes a magazine on a disk compiled from users group magazines, and we have been on it. Would you believe that two months in a row they sent me disks that wouldn't work? I called IBM on its bulletin board for users groups, and two days later an express mail delivery came to my door with a new disk.

**Ever get any inside tips?**

No. IBM is very closemouthed. Everybody in that organization is a clam. Well, I did get some information once so I could put it in the newsletter that would be out after they announced the product. But [inside tips] just don't happen.

**What special features of the SVCS distinguish it from other users groups?**

We have an extensive public domain software library that is the property of the club. Among the programs is Keyloc, which allows the user to modify two-key commands to be made with one keystroke. It's particularly suited to disabled computer users. The program belongs to the club, and we make it available free for the asking. Every time I mention that, we get lots of requests. Another popular program is one by a member, Herb Shear. It's a handy gadget for a quick boot-up, called Quick Power Up.

**What is ahead for your group?**

We are planning on courses of various types. Now we need a classroom equipped with Personal Computers. The SIGs [special interest groups] are growing constantly. Anytime any interest is shown, we'll start a SIG.

**Which is the biggest SIG?**

Probably the New Users.

**You have a club bulletin board system. Are you concerned now that Pacific Bell is scrutinizing boards and seeking legal action against those the company believes are passing illegal information such as credit card numbers?**

With so much junk going on the board, how can one person watch it all? How can [the company] cut off bulletin boards? There are too many of them. It can't legally cut off the source, unless you don't pay your bill or if you used the board for illegal purposes. Unless [the firm] can prove that, it could be false arrest.

**When were you introduced to the IBM PC?**

Not until I joined the club. The PC I use is club owned.

**Would you buy an IBM PC?**

No comment. Today I would, because I don't want to learn a new system. But based on my knowledge of the industry, I go back to no comment.

**How about other members?**

I can't quote them, but I have to believe they see [the state of the industry], too. But their egos won't let them say it. You have to stay loyal to your checkbook. Many compatibles are being more innovative.

**Has being executive director opened**

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**any doors for you personally?**

My brother, Alfred Jay Bollet, is editor of *Medical Times* magazine and I have written articles for it on computer use by physicians. It has mentioned the Silicon Valley Computer Society in several articles. It is very often not what you know but whom you know. My brother does a lot of writing. On one visit to his home a few years ago I said, "you need a computer." He said, "nah." But a year later I visited again. Lo and behold, there was an IBM.

**What do you think is the future of the IBM PC?**

I will refer you to an example of my weird sense of humor in our latest newsletter. The item: "T.J. Watson Jr. [former head of IBM] has resigned. Will the company stay in business?" Of course it will! I believe IBM will become the largest company [in net worth], past Exxon and others. But I think IBM is selling the PC on its name. IBM is being outclassed in innovation. Both Apple with the Macintosh and Hewlett-Packard are more user-friendly than any IBM.

**What do you think will be the future of the microcomputer and users groups in general?**

You won't be able to breathe without them [computers]. Dealers have come to realize that computer clubs can solve many of their problems and reduce the calls for help from customers. The user has discovered [that] the dealer/salesperson is not the knowledge base he needs, [that] he can get his answer through the club. I am far from an expert computer operator. But when I get into trouble, I have a telephone with 16 memory buttons and behind one of those buttons I can get the answer.

**So you think users groups will be around for some time?**

Sure, especially because dealers have been cooperative in encouraging membership. Most were not until the recent past. We are now putting out application envelopes with displays, and dealers are accepting that.

**Do you expect to stick with the SVCS?**

If it doesn't kill me. I have to stay active. I have a stack of unread books and magazines, though. In two weeks I've received 300 pieces of mail for the SVCS. I've got a 5-inch stack of letters that need to be answered and [I] fell further behind while my system was being repaired. One day I finally sat down to write a couple of letters, put in the buffer, started printing a couple out, and then started on another. I looked over at the printer and there it was, churning out blank pieces of paper — no printer ribbon! □

# MAIN STREET FILER

*An easy-to-use database with limited file size and a high price*

BY DOUG & DENISE GREEN
*Review Board*

What most Macintosh owners have been waiting for is an information manager that uses the machine's built-in capabilities. We found one — the Macintosh version of Main Street Filer from Main Street Software. Although it's in its first release for the Macintosh, the program has been running on other computers for a while, so it is surprisingly free of problems — and a joy to use.

Main Street Filer allows you to design and edit your files taking full advantage of the Macintosh's speed and ease of use. If the features and ease of use of other Macintosh software amazed you, this file manager will not disappoint you.

Main Street Filer is an indexed, sequential-style program that uses the pull-down menus and dialogue boxes familiar to Macintosh users. All information is organized into files, records, and fields. A file is a defined set of information, such as an address list. All data associated with one name forms one record. The specific data contained in each record is known as a field.

This multifeatured program has good flexibility. You may design specific, custom files the size of which are limited only by disk size. The maximum number of records you can place in one file is 65,000, and each record can contain up to 1,440 characters.

A record may have from one to 36 fields. Each field title can be up to 20 characters long; the data entered can be from one to 40 characters long.

You can retrieve data either by the order in which you have designed the file, such as listing information starting with name or ZIP code, or by selectively choosing those records that match specific criteria. You can specify such criteria for any of the fields in your record. You can set more than one criterion per field. For example, if you had fields titled *sex* and *age*, you could select only those records for women over 30.

Once you have entered Main Street Filer, you see a Menu Bar with these options: File, Add, Change/Examine, Delete, Copy, and Print. There is also the Macintosh Apple menu, which contains the same choices available with all Mac programs, as well as an option that gives you information about Main Street Filer. This tells you how much space is available on your disk, the number of records, and size of the file you are using.

You can request extra on-screen help throughout the program. Depending on where you are in the program, the About Filer option will refer you to the appropriate page in the documentation.

The first two options from the Menu Bar — File and Add — let you create new files, add records to old ones, restructure the order in which files are maintained, and close files. Change/Examine lets you change your file design without losing any data, locate and inspect records, and add a company name, which will appear in printed reports.

With Delete you can erase individual records or records selected by criteria. The erasure is permanent. If you wish to delete entire files, you simply use the Macintosh's trash can.

The Copy option lets you copy a file design from an existing file and use it as the basis for a new file. You may also move selected records to your new file.

Print lets you make printed copies of reports in draft, standard, or high-quality type. You can design columnar reports, mailing list reports, mailing labels, mailing envelopes, or Rolodex cards. One to three mailing labels may be printed across the page. You can also create a paper reproduction of the Macintosh screen. Columnar reports can contain as many as 36 fields, but a field may be printed only once. Reports can have up to 137 columns, if you don't mind the 9-point font for reports exceeding 80 columns.

You can total and subtotal numeric fields. You cannot, however, perform calculations to produce columns that are not already fields in your database.

Having used several other pieces of Macintosh software, we expected the use of the disk to take a bit of time. But we were impressed with the speed with which a new index is created or a file restructured on the disk (as well as the speed of the program itself, which we expected).

We tested the capabilities of Main Street Filer by creating our own address file of 67 records with 10 fields each. The program helps you create such a file by providing you with a predefined structure for such a file (which you can easily modify). Our address file used 18K for the basic file and was simple to create. We had

**Summary:** Main Street Filer, an easy-to-use file manager for the Macintash, makes good use of the Macintosh environment and permits you to design — and quickly change — simple records. The information cannot, though, be used with the Mac Write word processor; file size is limited; and it is a bit pricey.

**Product details:** List price, $249.95. Available for the Apple Macintash. Requires 128K RAM; one disk drive; Imagewriter printer. Second disk drive strongly recommended. Published by Main Street Software, One Harbar Drive, Sausalita, CA 94965; (415) 332-1274.

*Doug Green, a director of school computer services, has also taught computer programming and worked with both mini and microcomputers for the past eight years. Denise Green has been an educational computer consultant for three years and teaches computer use to adults.*

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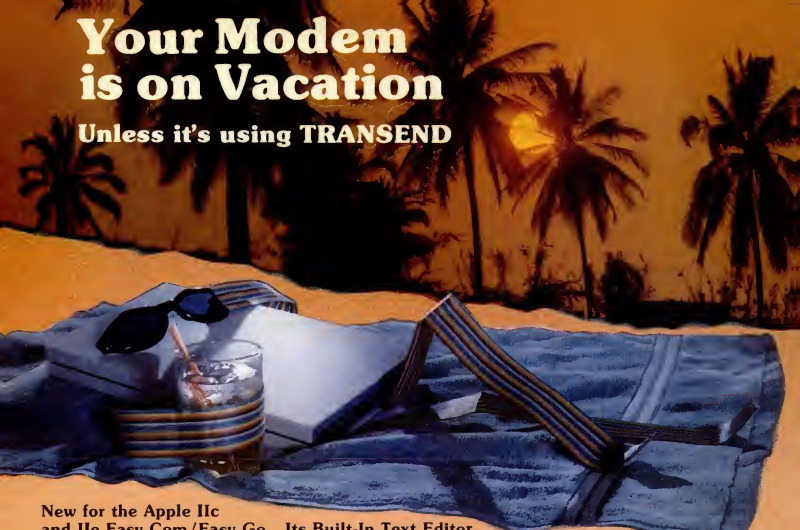

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It knows the basics such as telephone number retention, Auto-Logon, on line printing, has a big Capture Buffer and auto disk save. But that's not all. Easy Com/Easy Go also handles advanced operations including keyboard macros, redefinition of the keyboard, XON/XOFF, verification protocol, and multiple flow control options. It works as well with most modems as it does with Transend's own modem, and at speeds up to 1200 Baud. Compatible with all Apple II's, Easy Com/Easy Go is so simple even a mouse can use it.

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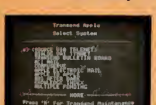

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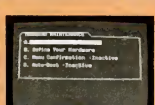
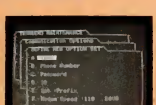


All you do is select, and Easy Com/Easy Go does the rest.



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*Main Street Filer is easy to use. We designed a file, added records, and printed reports quickly.*

to change our file design at least twice and did this in a few minutes using the Change/Examine option. This program takes full advantage of the mouse.

We found a few noteworthy quirks. If you plan to use names as the primary field for the order of your file, you should enter them without commas. Use another character, such as an asterisk (as in Green*Doug). If you use commas, you will not get the desired results either when entering data or searching for records. Quotation marks are not allowed anywhere in your files.

The plus and minus icons at the bottom of the screen that let you scroll either forward or backward are handy, although the program gets confused when you reach the end of a file.

You cannot use Main Street Filer information with the Mac Write word processing program, nor do you have any options of changing fonts. The program uses the 12-point or 9-point Geneva font, depending on your report's width.

Main Street Filer is easy to use. We designed a file, added records, and printed reports quickly. We also added fields to existing files and changed the field used in the index. We do suggest that all users at least skim though the manual to get a feel for the program. The Help options and pull-down menus won't tell you everything you need to know.

Main Street Filer is a well-designed program that is seemingly bug-free. Try as we might, we had difficulty making the dreaded bomb icon appear. We did manage to cause the initial version of the program, 1.0, to fail under one circumstance, when we tried to print a series of records in order of ZIP code. We specified that the program begin with ZIP codes starting with zero and ending with Z. At this point, the program failed and we had to restart the machine.

During our review, however, the publisher released a second version of the program, version 1.1, in which this problem was corrected. You should not buy the program's initial version (which was on the shelves for a short time); make sure you get version 1.1 or later.

We used only one disk drive, which is fine if you place your file on the same disk as the master program. We strongly advise you not to use a separate disk while you are working on a file or entering records. The amount of disk switching takes all of the joy out of this program. It takes seven switches just to open a file. A second drive would allow you to handle large files conveniently.

This program organizes all files using an advanced B+tree indexing system. This means that a separate file with the .IDX suffix accompanies each file you create. The program does this for you to provide for quick data searches. Unfortunately, the documentation fails to warn you of this extra file and its importance. Placing an .IDX file in the trash will prevent you from using your database again because the .IDX file contains the information Main Street Filer needs to find various records.

Except for the lack of a clear explanation of the .IDX or index file, the manual is excellent. It is well-organized and functions nicely as a learning and reference manual.

The main manual has 82 pages and is divided into the following sections: support plan, program overview, program operation, examples, glossary, and index. In addition, an eight-page short course and a six-page quick reference sheet accompany the program. The short course gives you a brief introduction and tutorial. The reference sheet lists the latest differences from the original manual and an important list of system errors.

Registered users receive a 90-day warranty for defective disks, a back-up disk for a $15 charge, and notification of any updates. After 90 days, damaged disks will be replaced for $25. The company allows you to make one backup copy of the program disk for personal use.

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offer support without the subscription charge because the program is new. We made an anonymous call and were pleased with the support we received.

Main Street Filer is a pleasure for users who have struggled with database systems that make file creation difficult and the changing of file designs for established files either painful or impossible. The capability to quickly create a new index for searching is impressive, and report writing is among the easiest we have ever seen.

The relative quality is hard to assess because it is the first Macintosh database we have worked with. When compared to the six non-Macintosh databases we have used on a variety of mini and microcomputers, Main Street Filer is the easiest and most flexible. It is also a bit pricey at $249.95, though as competition in the Macintosh database market heats up, it could get less expensive.

If you can live with disk size limitations and the product's current lack of capability to merge with a word processor, then this program is definitely worth your consideration. □

# DOLLARS AND SENSE

## *Money manager has good performance, some problems*

**BY DON CRABB**
*Review Board*

Dollars and Sense from Tronix Publishing Inc. is one of the numerous personal financial management programs. It helps you control your finances by tracking how you save and spend your money. Although the general performance of the product is very good, it has some drawbacks that cause us to have some reservations about it.

The program runs on IBM PCs and compatible computers as well as Apple IIe and IIc machines. We tested the IBM version, which is written in UCSD Pascal and operates under the UCSD p-System operating system, which appears on the program disk as an operating subset.

Dollars and Sense divides your personal finances into accounts and transactions categories. The program supplies three sets of accounts automatically: Household Accounts, Business Accounts, and Tax Preparation Accounts. Each set of accounts is divided into smaller accounts such as personal checking, cash, accounts receivable, inventory, IRA payments, and savings interest. In addition to these, the program permits you to create your own accounts.

The program keeps track of cash flow in and out of the accounts. It can use the account data that is stored on a month-by-month basis to produce tabular reports or bar charts. Both the reports and the charts can be produced on supported printers such as the Anadex 9501B, IBM Graphics Printer, and Okidata ML series. You need only to configure the program for your particular computer and printer once.

The first time you use the program, you select or create a group of accounts and format an account disk. Occasionally, you modify existing accounts or add new ones, redefine existing accounting-group relationships, and make backup copies of your account disks. The most regular activity is entering financial information and reconciling the information in your account disks with your bank account and investment records.

Each Dollars and Sense operation is selected from a menu. The operations include defining accounts; modifying checking account data; entering, editing, and reporting transactions; reconciling bank statements; preparing financial status reports and graphs; writing checks; modifying the hardware configuration specifications; and copying account disks.

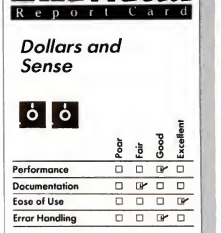
Dollars and Sense lacks a security system. No data encryption or password protection of files is provided. Since this program is intended for home use, the lack of protection schemes is not an important issue, but you may want to keep it in mind.

The wait between screen or menu changes and during the updating of accounts is short. If there is a delay before information is displayed, you are usually given a message that describes the reason. These messages make the program easier to use and are especially important to the novice.

The low resolution and simplified format of the graphs are a hindrance to their use as financial tracking and planning aids. They are limited to a few kinds of bar charts.

Check writing is one unusual feature provided by Dollars and Sense. (A sample form and description is in the manual with an order form for checks that will accommodate the printing scheme.) You load the check forms into your printer and the program prints the checks in the amounts you request. If you have a large number of checks to write each month, this is a welcome feature. The check printing format cannot be changed; this is a definite disadvantage to an otherwise handy option.

Dollars and Sense does not require an installation process like other microcomputer programs. Because the program works with the p-System kernel provided on the program disk, you do not use PC-DOS. The program starts automatically after you place the program disk into Drive A, put a blank disk to hold your accounts into Drive B, and turn on the computer. A program disk, a demonstration/tutorial disk, and a manual are supplied. The program disk is copy-protected. A backup can be ordered from




**Summary: Dollars and Sense is a program for personal financial management that performs well but has drawbacks. The documentation is not up to par; there is no on-line help; the program can't be used with information from other programs on the computer; and generated graphics are of low quality. With these problems addressed, the program could be very good.**

**Product details: List price, $165. Available for IBM PC and compatibles running UCSD p-System (supplied); also available for Apple IIe and IIc. Requires 64K random-access memory; two disk drives; monochrome monitor; graphics card; printer, color monitor recommended. Published by Tronix Publishing Inc., 8295 S. La Cienega Blvd., Inglewood, CA 90301; (213) 215-0529.**

*Don Crabb is responsible for computer training at a major Midwestern university. His reviews and articles on microcomputing have been published in several magazines.*

Tronix for $20. The tutorial disk is not copyprotected, and the manual urges you to make at least one backup copy.

Tronix will replace any defective disk within 90 days of purchase for free. You can purchase a replacement disk for $15 up to one year from the date of purchase.

The demo disk just gives a walk-through of the program menus with brief explanations for the action on the screen. It allows a very limited amount of user interaction and is only a superficial introduction to the program.

The manual contains a section on getting started, suggested applications, command references, a step-by-step tutorial guide, and an error summary. The tutorial guide does not correspond to the demonstration/tutorial disk. The tutorial in the manual offers a more thorough overview of the program, but the printed documentation is the weakest point of the product. The manual is far too skimpy, even though it comes with a complete table of contents and index. Reference material that describes commands and discusses program applications is incomplete.

In addition, there is virtually no on-line help available in Dollars and Sense. Some of the menu selections offer a screen prompt that describes the possibilities available at that point, but no dedicated on-line help function exists.

Dollars and Sense is not designed to share data with other programs, a serious drawback to any microcomputer application.

Tronix provides technical assistance through its customer support group. Unfortunately, as is often the case, the number is not toll free and must be called between 9 a.m and 4 p.m. PST. More irritating than the limited time for telephone technical support is the fact that to use this service you have to pay Tronix $20. This payment entitles you to a backup program disk, telephone and mail technical support, and periodic newsletters (which we have not yet received). We object to the additional fee for support services that should be provided as part of the program package.

Our experience with the telephone support system, however, was consistently positive. During our review, we called several times to ask questions, and we received competent, accurate responses. The technical support is the strongest part of the package. Since the documentation is problematic, this support is especially important to the novice.

Dollars and Sense has a number of annoying features. The program to copy the tutorial disk (a main menu item on that disk) does not have a proper exit. It is unclear when to remove the copied disk or when the copying program is finished. When the List Set of Accounts command is selected in the Start Account Disk menu and None of These Accounts is chosen, the program refuses to process the command and waits until another command is entered. The program does not display an error message or notify the user of the mistake.

Dollars and Sense is a mixed bag. Although the performance of the program is good, the product has many drawbacks. The printed documentation is mediocre and incomplete. The on-line documentation is almost nonexistent. These problems make the program difficult to use. It cannot handle data derived from other programs. The graphics generated are of low quality.

Dollars and Sense could be an excellent product if these problem areas were improved. As it stands now, we have definite reservations about it and suggest that you carefully test the program before you buy. □

# PRO AID

## *Program adds functions to Radio Shack Model 100*

BY P. GREGORY SPRINGER
*Review Board*

If you are frustrated by the limitation of the eight function keys on your Radio Shack Model 100 or wish your machine could have a Dvorak keyboard, then a program called Pro Aid may be what you're looking for. In fact, developer David Sumner says the program provides the Model 100 with capabilities it should have included in the first place. Given the facility and capability that Micro Demon's Pro Aid adds to the portable, his claim is hard to dispute.

Programmable-key software for other personal computers has proved to be popular. Radio Shack gave the Model 100 only eight little clickety buttons above the keyboard that add a few functions to the machine but can't be redefined for use outside of Basic. A lap-size portable like the Model 100 compresses its capabilities into one very small package, and Pro Aid helps multiply that condensed power by

*P. Gregory Springer is a free-lance writer and the author of* Electronic Notebook. *He writes about computers and the entertainment industry.*

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allowing you to redefine 26 keys. They can be used with Basic as well as the Telcom and Text programs. Pro Aid has many other features, such as a calculator mode, an auto-off function, and a numbers-lock warning.

Four copies of Pro Aid are included on Side One of a cassette tape; we loaded the program easily in one try. Once loaded, the program stays in 1.8K of memory with no visible menu name. (It can be turned off and on if you like, using the Basic Poke and Call commands.)

Where do the 26 programmable keys come from? When the Model 100 Caps-Lock button is depressed, it would normally be redundant to also press the Shift key with the letters A through Z. Making use of this redundancy, Pro Aid allows the combination of those two keys plus any letter to activate 26 new functions. Because keeping the Caps-Lock feature switched on in the Text or Telcom programs might prove awkward, the Escape key works in the same way as the Caps-Lock/Shift combination in those programs.

Upon start-up of the program, the original key assignments for letters A through Z are programmed for use in Basic. With Caps-Lock down, pressing Shift A produces the characters ASC on the screen, Shift B gives BEEP, Shift C produces CHR$, and so forth. Changing those assignments is very simple. From within Basic, pressing Control [ (bracket) starts the programming mode. You enter the letter you wish to reassign, its new definition, and press the Enter key. The manual explains how to do this. Although more examples might have been included, enough are provided to put the user's imagination on the right track.

Although using the key reassignments is quick and easy, trying to use more than two in rapid succession may result in "overlapping" commands — and possible problems.

The only major problem with Pro Aid's programmable key assignments is a 14-character limitation. That means you cannot have your full name and address — or the word *prestidigitation* — programmed into a single keystroke.

In the Telcom program, keys can be assigned to produce various phone numbers, several commonly used parameters, passwords for CompuServe or The Source, and so forth. Occasionally, when we were using the programmed keys while communicating, the information on the display suddenly appeared in reverse video and could not be controlled. The flaw was not consistent, though, and Telcom can make use of the 26 key assignments just as well as Basic or Text.

Apart from the big selling point — the 26 redefinable keys — Pro Aid tosses in a number of helpful items that almost justify its purchase in themselves. From within Basic, the Control key triggers 17 new functions, including the capability to enter, directly from Basic, the Addrss, Schedl, Telcom, or Text programs; delete a range of lines in Basic programs; and establish rules for auto-line numbering.

The Escape key in Basic serves as the auto-number key and can be disabled or changed to begin at any number and continue in any increment.

Warning beeps are added to Basic editing and to the Number key. If the Number key is depressed at the time the machine is turned on, the cursor stalls and irritating beeps are sounded. This alarm might also be a way to prevent office associates from "borrowing" the machine for a minute. The warning can be turned off via the Poke command.

With Pro Aid, you can activate a calculator by pressing Control K, without

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Report Card

*Pro Aid*

| | Poor | Fair | Good | Excellent |
|---|---|---|---|---|
| Performance | ☐ | ☐ | ☒ | ☐ |
| Documentation | ☐ | ☒ | ☐ | ☐ |
| Ease of Use | ☐ | ☐ | ☐ | ☒ |
| Error Handling | ☐ | ☐ | ☒ | ☐ |

**Summary:** Micro Demon's Pro Aid provides the Radio Shack TRS-80 Model 100 Portable Computer with many functions and utilities that the manufacturer overlooked. Simply and easily, the program adds 26 new programmable function keys, a calculator, easier Basic editing, and automatic line numbering, as well as other useful functions. Its documentation leaves something to be desired.

**Product details:** List price, $39.95. Available for the Radio Shack TRS-80 Model 100. Requires 1.8K of memory; cassette. Published by Micro Demon Inc., P.O. Box 50162, Columbia, SC 29250; (803) 733-0980.

interrupting any Basic program in memory. The calculate mode performs simple math functions and also reads out the value of any variable in the program and the values of consecutive memory locations. The calculate mode will also convert hexadecimal and decimal values in either direction.

Because the Model 100 lacks a random-number generator to produce a different sequence of numbers, Pro Aid includes a Randomize function that Basic programs can call when needed.

Last but not least, Pro Aid allows you to manually shut off the computer without interrupting the program or text being worked on. This is done by pressing the Graph and Code keys simultaneously — one stretch of the hand to the keys on either side of the space bar will do it.

Micro Demon received "instant" feed-

***Pro Aid multiplies the power of the Model 100 by allowing you to redefine 26 keys.***

back to the initial versions of Pro Aid from the Model 100 special-interest group on CompuServe. Developer David Sumner responded just as quickly by issuing a revised version that allowed users to relocate the program or to disable it to avoid conflict with other machine language programs in memory.

Though such support is praiseworthy, there is no address or phone number included on the cassette tape or the manual, and Sumner returns only calls that are directed to him through his mail-order service secretary. The printed documentation is a spiral-bound booklet of 24 pages. It provides simple and adequate information, but the lack of a table of contents and page section headings are glaring omissions. Luckily, the one-sheet summary of the original key assignments, Poke and Call addresses, Basic Control keys, plus function order are really all that's necessary.

According to Radio Shack, the popularity of the Model 100 continues and the machine won't be replaced by a new version anytime in 1984. Pro Aid adds enough new capabilities to the current model that the wait for upgraded portability is made much easier and maybe even unnecessary. □


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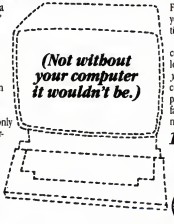


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# KB5151

*Keyboard improves IBM PC, has some inconsistencies*

BY ROBERT DEW
*Review Board*

Anyone who does a lot of typing (programming, letters, or prose) on the IBM Personal Computer keyboard will tell you one thing: The keys are in the wrong place.

Consider a Basic application. The 25th line of your screen has a menu of function key definitions, arranged horizontally. Keys F1 to F10 are placed vertically on the keyboard. How many times have you entered a number in your spreadsheet only to find that you hit a cursor control key?

Complaints about the IBM keyboard, which are common, have spawned a market for replacement keyboards. The largest domestic manufacturer of computer keyboards, Keytronic, has tried to answer the complaints with its IBM Deluxe Keyboard, the KB5151. The company also produces the KB5150, a keyboard designed only to replace the original, with few improvements: Keytronic supplied a light-emitting diode (LED) in the Caps and Num keys and a less resistant key touch for about $200. This keyboard provided a quieter environment but did little for ease of use when it came to keyboard layout.

The Spokane, Washington, firm announced the Deluxe Keyboard last November and began shipping it this spring. At first, we thought it was one of the best peripheral investments for the PC. We think less of it now after lengthier testing, especially after using it with newer programs such as Framework, D-Base III, and the latest version of Cross Talk. In those added tests, we discovered several disconcerting inconsistencies and problems.

The KB5151 has 99 keys (IBM's keyboard has 83) and features horizontal function keys along the top, followed by five other function keys: Pause, Cursor Pad, Print Screen, an unassigned key, and Reset. Below this row is a recessed area for function key templates. The QWERTY layout is physically separate from the numeric pad and the new cursor pad. This, and the little nibs on the F, J, 5, and center cursor keys, make data entry a breeze.

The important function keys, such as Delete and Insert, have been duplicated on the cursor pad. For word processing, this feature is a fabulous addition. A second Enter key on the lower right of the numeric pad speeds the use of this area.

Instead of using the combination Control/Num Lock to freeze the display temporarily, you can press the Pause key while using virtually any program or the operating system. You can then conveniently touch any key to resume.

When the PC is first turned on, the keyboard's numeric keypad area is functionally identical to the PC's except for an additional Enter key, illuminated Num Lock, and a smaller plus key. The key sensitivity is slightly greater than that of the 5150, which some users said was too unforgiving for double strike.

*Robert Dew is a computer consultant and vice president of The Chicago Computer Society. Dew has lived and worked in the United States since emigrating from Britain in 1976.*

**InfoWorld**
Report Card

*KB5151*

| | Poor | Fair | Good | Excellent |
|---|---|---|---|---|
| Setup | ☐ | ☐ | ☐ | ☑ |
| Ease of Use | ☐ | ☐ | ☐ | ☑ |
| Performance | ☐ | ☐ | ☑ | ☐ |
| Documentation | ☐ | ☐ | ☑ | ☐ |
| Serviceability | ☐ | ☐ | ☑ | ☐ |

**Summary:** The Keytronic KB5151 is one of the most sensible and overdue accessories for the IBM Personal Computer — but beware of some problems that appear when it is used with newer programs such as Framework and D-Base III. It is best to check its performance with a given package before you buy. The price may be a little steep for the home user, but most owners should bury the IBM keyboard and use the KB5151 to really talk to their PCs.

**Product details:** List price, $255. Available for the IBM PC. Manufactured by Keytronic Corp., P.O. Box 14687, Spokane, WA 99214; (509) 928-8000.

The KB5151 is impressively quiet. You can literally type silently by "touching" the keys.

Reset, a new key, is the farthest right of the horizontal keys. Using it with the Control key, you can reset the system. This seems a bit unnecessary.

Our other criticisms are more important. When we started using the 5151 keyboard with three new products — Framework, D-Base III, and Cross Talk XVI — serious confusion resulted.

Framework uses the farthest right plus and minus keys to select frames. It is useless to have the deluxe model KB5151; its keys simply don't work for this purpose. Don't bother buying the KB5151 for Framework. We also tried to use Cross Talk XVI; the program constantly resets the hardware. It is very annoying to exit the program into a word processor and then keep typing a slew of 7s when you hit the Home key.

We still think the product is worthwhile, but with several programs the keyboard proves extremely tiresome or less than functional.

Users fluent in Basic, and those who use Control/Break often to cancel a DOS command by hitting the keys blindly, will probably hit the Reset key more than once. Under the function key row is a recessed area for program templates. Unfortunately, it is only a half-millimeter deep and functionally useless, even though Keytronic provides a set of blank stick-on labels to fit here. It would have been more logical to use a design similar to a telephone set, so that you could pull a plastic plate and slip in a new template. Removing the adhesive tapes makes little sense, even though they come up cleanly and easily.

The keyboard has operated flawlessly, except with some newer programs, since the day it arrived. It comes with an adequate, but seemingly unnecessary, manual. The keyboard requires no separate power supply and plugs into the keyboard socket on the PC. The return keys are excellent in both size and feel. The relocated Shift, Alt, and Control keys are more than welcome. The keyboard weighs about as much as the IBM PC's, but its dimensions are different to accommodate the horizontal function keys and dedicated cursor keypad.

With use of some software packages, the LEDs in the Caps Lock can get a little confused. A simple touch of the Reset key with Caps Lock instantly fixes the problem.

One problem if you want to use this replacement keyboard — or any other, for that matter — is the manufacturer's claim that you can buy a PC without a keyboard. That is not easy to prove. Large companies we have talked to can do this, when


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they shop around, but an individual dealing with an IBM Product Center or computer store will probably find otherwise.

Scott Andre, a Chicago ComputerLand manager, advises us that, indeed, all IBM PCs ordered from Big Blue must have IBM keyboards. Although this may be true, we think the new KB5151 is a good peripheral for the IBM PC.

The first of the units were delivered without a proper FCC registration number. This caused a delay and proper shipments started May 15, 1984.

If any defects show up in a keyboard, Keytronics dealers are authorized to replace the unit immediately.

Wake up, IBM! Your keyboard has been put to sleep. Lose gracefully, and as the saying goes, "If you can't beat 'em, join 'em." Go build a better one! □

# HARDWARE

**Actrix** *(Actrix)* — This machine is a good choice for those who don't like choices. This CP/M microcomputer includes a built-in printer and modem. At 33 pounds, it's not very transportable. (4/9/84)

**Adam** *(Coleco)* — A flawed but acceptable entry-level home computer system. Its main advantage is that it includes everything but a monitor in one package. It is cumbersome, noisy, and has flawed documentation. (4/23/84)

**Apple IIc** *(Apple)* — An attractive, transportable version of the venerable IIe that embodies the most popular options in one sealed case. The machine is not a performance marvel for business and is packaged as a family or home machine. (7/9/84)

**Apricot** *(ACT)* — This splendidly conceived and executed product is IBM PC compatible and then some. Anyone looking for a serious business system should consider it. (4/2/84)

**Dynaframe** *(Vista Computer)* — This expansion chassis, a slot saver, allows you to connect hard disk drives to your IBM PC and add eight expansion slots — without taking up any itself. (7/2/84)

**HP-150** *(Hewlett-Packard)* — This machine proves that there are intelligent alternatives to the IBM Personal Computer hoopla. This microcomputer, with an innovative touch screen and a lot more, gives you a solid name and plenty of byte for the buck. (3/12/84)

**Macintosh** *(Apple)* —

Apple's new computer is probably the easiest to use, most powerful and innovative personal computer. The Macintosh could use added memory and a hard disk, but overall is superior to just about every other personal computer. This is the computer that will challenge IBM's dominance. (3/26/84)

**Micro 16s** *(Fujitsu)* — This well-built dual-processor machine from one of Japan's leading computer makers can run both CP/M and MS-DOS programs. The lack of proper support software makes it less desirable than it might otherwise appear. (6/4/84)

**NEC 8201** *(Nippon Electric Company)* — This lap-size portable, a worthy competitor to the Radio Shack Model 100, is more expandable but has less built-in software. (3/19/84)

**Olivetti M10** *(Olivetti)* — The third Model 100-style lap portable in the U.S. market sports a tilting LCD screen and Italian styling, but little else to set it apart from the Model 100 or NEC 8201. (7/2/84)

**PCjr** *(IBM)* — Aimed at two diverse markets and ill-suited for either. Although it has potential, it is too expensive as a home or educational computer, and it is not really capable of handling the business applications that are required by those working at home. (5/7/84)

**Professional 350** *(DEC)* — This machine, a desktop version of the venerable PDP-11 computer, is intelligently designed but has slower-than-expected performance. (4/23/84)

**Rainbow 100 Plus** *(DEC)* — As a dual-processor machine that uses both CP/M and MS-DOS programs, the hard disk-equipped Rainbow 100 Plus is a good choice for executives requiring computing power in a pleasant-to-use and attractive package. The machine cannot be expanded as fully as you may like. (6/4/84)

**Six Pak Plus** *(AST Research)* — Provides several additional hardware functions in a single card for IBM PCs. The board more than meets its performance claims and provides features that are totally compatible with the IBM unit. (6/25/84)

**Tandy 2000** *(Tandy)* — Tandy's MS-DOS machine is superior technically, and provides color display with good resolution at a reasonable price. Not all IBM Personal Computer software will


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work on the machine. (6/18/84)

**TI Portable Professional** *(Texas Instruments)* — An IBM PC-like machine with some great features. Though not strictly IBM PC compatible, its color and graphics capabilities are superior, and it is a solidly built and well-documented unit. (6/11/84)

**TPC-I** *(TeleVideo)* — At 32 pounds, it's not very transportable, but this CP/M-based machine gives you good value for the price, including built-in graphics capabilities. (4/30/84)

**Transtar 130S** *(Transtar)* — For a reasonable price you can get yourself a well-made letter-quality printer. Best suited to low or moderate usage. (1/30/84)

**Ven-Tel HP-150 Internal Modem** *(Ven-Tel)* — This is a well-built, smart modem for the HP-150 personal computer. The modem can operate at three speeds, and establish incoming and outgoing connections. Its documentation could be better, and some of the commands may be cryptic to novices. (5/7/84)

# SOFTWARE

**ASAP Five** *(ASAP Systems)* — A relational database that suffers from some annoying performance problems and less-than-adequate documentation, though it is easy to use. (5/14/84)

**CIP** *(Concentric Data Systems)* — This file manager gracefully holds its own in a crowded market. A breeze for beginners, tolerant of the sloppy typist, and well-documented. Excellent for those who do not need a full database system. (5/14/84)

**Dataease** *(Software Solutions)* — This relational database management system has beautiful screens, labor-saving features — and bugs that are unexplained and impossible to circumvent without extensive technical assistance. Not ready for market. (4/23/84)

**Dayflo** *(DayFlo Inc.)* — For those with a glut of unstructured information, Dayflo offers a welcome way to store and retrieve a paper overload. But it is slow, hungry for hardware, and will make you plow through manuals. (6/30/84)

**Desq** *(Quarterdeck Office Systems)* — Power, complexity, and a multitude of features in a product that

integrates existing applications in a window environment and makes data transfer as easy as possible. (6/30/84)

**Docuмax** *(Signum Microsystems)* — A set of file utilities that lets you compress text by about 50 percent and inspect text and binary files rapidly. You can also search multiple documents for words and phrases. It is rather expensive for what it does. (5/7/84)

**IBM Logo** *(IBM)* — This IBM packaged and distributed version of Logo is aimed at beginners as well as more serious programmers. A color monitor is recommended, to take full advantage of its turtle graphics. The package is a complete version of the language. (6/11/84)

**Jack 2** *(Business Solutions)* — An integrated product based on a word processor. The included database, spreadsheet, and graphics modules are not exceptionally strong individually, but together the three modules present an easy-to-use single product for business. (6/18/84)

**Jane** *(Arktronics)* — An integrated package with some innovative features — and some difficulties. An overbearing use of icons, some slow features, and some awkwardness mar the product, which could benefit from an emphasis on efficiency rather than gimmickry. (6/18/84)

**Leading Edge Word Processor** *(Leading Edge)* — This is one product that lives up to its sterling claims. The product, based on the established Wang word processing system, is easy to use, powerful, and reasonably priced at $100. (6/25/84)

**Mac Paint** *(Apple)* — A universally appealing graphics program that allows you to draw just about anything you can think of. It is one of the best introductions to computing we have seen, as well as being a powerful and well-produced product. (7/9/84)

**Mac Write** *(Apple)* — A breeze to use and capable of producing documents with an attractive appearance. The Mac Write word processor is hampered only by the lack of more advanced features and the limit on the amount of text you can use in one document. (7/9/84)

**Managing Your Money** *(MECA)* — A set of tools to do home financial planning and record keeping carries the well-known Andrew Tobias name, but has insufficient documentation. It is basically flexible and easy to use. (6/25/84)

**Micro Speed Read** *(CBS Software)* — A worthwhile investment for faster reading and increased comprehension. The manual itself is practically a textbook on improving your reading. A sound educational approach in a quality product. (7/9/84)

**Multiplan for the Macintosh** *(Microsoft)* — Our software product of the year in 1982 has come back as an even better spreadsheet, thanks to the Macintosh. An all-around excellent product. (4/9/84)

**Office Writer** *(Office Solutions)* — This word processor operates nearly identically to the well-known Wang Laboratories dedicated systems. Though it lacks a spelling checker and print spooling, and is slow with very large documents, it is powerful. (7/2/84)

**OZ** *(Fox & Geller)* — A specialized package designed to organize and consolidate financial information in a


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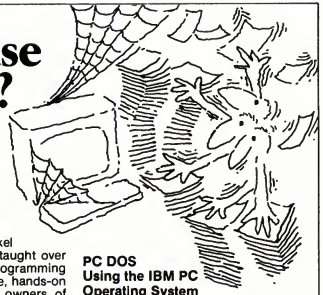

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company. OZ is clearly aimed at novices — and does a good job. Fills in the blanks, has good graphics and good documentation, as well as incredibly tolerant error handling. (6/25/84)

**III E-Z Pieces** *(Haba Systems)* — This is the first integrated word processor, spreadsheet, and database for the Apple III. It is easy to learn and use, fast, and a good buy. It may not have all the features you want that are included in separate products. (5/7/84)

# ON-LINE

**CompuServe** *(CompuServe Information)* — A valuable information service that works. If providers continue to listen to user feedback, this has the potential to become *the* service for the microcomputing community. (4/23/84)

**Dow Jones News/Retrieval** *(Dow Jones)* — An informative, entertaining, on-line service that's well worth the money. Lets you pull fast-breaking stock market and business news off the wire. (4/30/84)

**The Source** *(The Source)* — The Source provides good quality and a broad scope of services at rates competitive with similar information systems. It is valuable to computer owners whose machines get medium to heavy use; first-time users should be wary of the high initial charge and questionable support. (5/7/84)

# REVIEW RESPONSES

## CHANGE THE CAPSULE

I was surprised to see your capsule summary of our ASAP Five product. I believe your original review contained a number of factual errors, and it is unfortunate that the errors in the original review have been incorporated in the capsule summary. The summary states that ASAP Five has "less than adequate documentation," yet the reviewer was able to create his first report in 15 minutes and felt that "the on-line help nearly eliminates the need for documentation."

The summary also states that ASAP Five "suffers from some annoying performance problems." It can be assumed from the original review that these problems include our backup policy and problems with running out of disk space on floppy diskettes. I feel our backup policy was completely misunderstood by the reviewer and that the issue of floppy disk space was poorly analyzed.

Finally, the summary fails to mention that the original review found no bugs and rated the program as Excellent in Error Handling.

*Robert Cyper*
*ASAP Systems*
*Soquel, CA*

*While the program's on-line help is good, the original review also noted that the printed documentation needs improvement. The performance problems mentioned in the review include difficulties other than those mentioned here by Cyper. We feel the capsule fairly reflects, in its limited space, our assessment of the product. — Editors*

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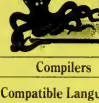


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*John C. Dvorak*

# TRAMIEL STIRS UP STORIES

Well, the dust has cleared over Uncle Jack Tramiel's takeover of **Atari.** After **big layoffs,** some stories have leaked that are worth repeating.

Most employees were glad when the ax fell because the anticipation was driving them nuts. All they heard were **rumors and stories,** such as the time when Tramiel supposedly **threw a table** of machines on the floor, saying they were all crap. He has no love for Atari hardware as it now exists.

Jack supposedly got a **parking ticket,** too, for parking without a permit in the handicapped-only zone at the company in Sunnyvale, California. You can make your own jokes out of that anecdote. One employee was supposedly **arrested** for using forged papers to extract equipment before the layoffs.

What is Jack up to? Rumor has it that he has a **32-bit computer** up his sleeve that Atari will manufacture.

But to figure out what might really happen you have to look at history. First of all, Jack is a big believer in "hardball" business ethics — you get the feeling that there is never any fun in what he does.

Next, Jack subscribes to a **vertical integration** approach toward manufacturing. That means the chips that go into a Tramiel product are made by a Tramiel company. That used to be MOS Technology, owned by Commodore.

The latter also shows a **penchant** for "dry test marketing," in which you announce products just to see what the response is. If there is not a strong demand, the product never sees the light of day.

One observer thinks Tramiel will make a deal to sell the super **Amiga machine** — that is actually the 32-bit machine he is talking about. Others see **Polo Microsystems** in some sort of adventure.

I think that Tramiel will do something more obvious than any complex deal. He will **dump** Atari products on the market as inexpensively as he can and as long as he can to try to put pressure on Commodore.

If he plays his cards right, Commodore's **stock price will tumble** and Tramiel will pull off a leveraged buy-out or merger of **Commodore and Atari.** Because of Commodore's inclination for offshore incorporation, I'll predict that Commodore will actually absorb Atari rather than vice versa.

Now, Atari/Commodore will be back in the vertical integration mold — and with a license for the **Hyperion design,** the 8088 chip, and other Intel chips, Jack can go in several directions. Personally, I think it's guys like Tramiel who keep things **interesting.**

**We Get Anti-IBM Letters Dept.** Don Cooke, president of Geographic Data Technology, asks: "What did IBM have to do so that when NBC news gave a detailed report on the failure of the Space Shuttle computer (on June 25) they never mentioned IBM's name?"

From Paul Stackhouse of Boston comes this note outlining a letter sent to F. Warren McFarlan, director of the first-year program at Harvard, who **endorsed** the IBM "standard."

Stackhouse says, "Harvard Business School and IBM. How wholesome, how American! This alliance reminds me of when good ol' Adolf Hitler and Joe Stalin got together to split up Poland. These two people were diametrically opposed philosophically yet they found a temporary use for each other because they had one thing in common — a lust for power. Harvard's business school should defend innovation, not stifle it."

Harvard? Innovation? Both words in the same sentence — I think **it's a first.** (Actually, I love kidding those happy-go-lucky folks at Harvard.)

William Mensch, president of Western Design Center, writes: "You incorrectly stated that Western Digital is developing a 16-bit version of the 6502. The correct name of the company is the Western Design Center and the name of the new chip is the W65SC816."

**Oops,** I did it again. I should ask Bill why the company changed its name. I liked the name Western Digital. Western Design Center sounds either like an art school or a furniture store.

**Swamped with Real Programmers Entries Dept.** Boy, have I received more than a few "Real Programmers" contest entries. Keep them coming. Jonathan Sachs of Sand River Software has these winners:

***Real Programmers** can't spell "quiche."*

***Real Programmers** won't participate in a sport that requires a change of clothes.*

***Real Programmers** would rather improve something than sell it.*

***Real Programmers** don't use word processors. They write specs with a line editor and a homebrew version of Run-Off. This may be one reason why Real Programmers don't write specs.*

Some more entries from someone who forgot to sign the letter:

***Real Programmers** don't wear suits and ties. If you see one with a new haircut, sell all your stock in the company he works for — he knows the company is failing, and he's obviously looking for another job.*

***Real Programmers** drink lots of coffee from Styrofoam cups — but haven't bothered to figure out how to use the coffee maker.*

Do you want to understand the microcomputer industry? All you have to do is **figure out why Xerox can't compete in it.** That's all there is to it.

People like to say how AT&T is a shoo-in in the computer business because **Bell Labs** invented the transistor. Hey, look at Xerox — it invented the mouse, the Macintosh, Small Talk, and dozens of user-interface advances. So what?

What about **Data General?** I was tossing some old files the other day and ran into a *Business Week* article from June 5, 1978. There it was, the CS/20, the Data General microcomputer **priced at $13,820** (an aggressively low price, according to *Business Week*). The big advantage of the CS/20? **It runs Cobol.**

According to the article, Data General president Edson D. de Castro "is clearly convinced that Cobol will give him a competitive advantage."

Years ago a friend of mine was always touting Data General as a company to watch. I think **a comparison** of sales figures between Apple and Data General says it all. DG **zigged** when it should have **zagged.** □

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